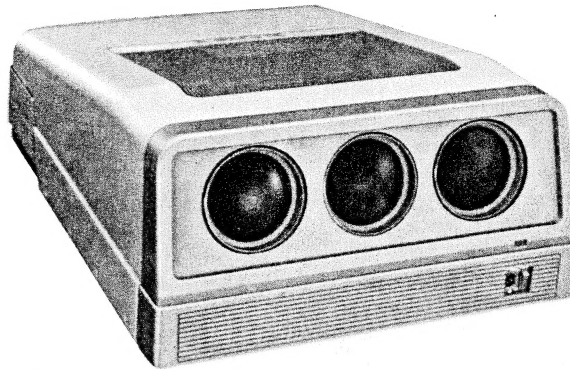


HDIH-1200M

RM-1200

SERVICE MANUAL

7074
AEP Model
Chassis No. SCC-D16B-A



HDVS

Note: The service manual for RM-1200 has been issued separately.

MODELS OF THE SAME SERIES

HDIH-1200M	
HDIH-2400M	

SPECIFICATIONS

Optical

Projection system	3 picture tubes, 3 lenses, Horizontal in-line system
Picture tube	9-inch liquid cooled high brightness tube LC ² (Liquid Coupling and Cooling) system
Projection lens	High performance HACC lens F 1.24/172mm
Projected picture size	100—130 inches measured diagonally Factory-adjusted to 120 inches measured diagonally

General

Light output	300 lm (white peak) 100 lm (all white)
Resolution (HDTV)	1000 TV lines (at screen center)
(VIDEO)	700 TV lines (at screen center)
Horizontal frequency	15kHz—35kHz
Vertical frequency	50Hz—120Hz
Color system	PAL, SECAM, NTSC and NTSC _{4.43} system, switched automatically

Test signal

Test pattern generator is incorporated.

Inputs

INPUT A/B: BNC connectors, 75 ohms terminated

G/Y, B/Pb, R/Pr

G: Composite, 1.0Vp-p ± 2 dB or non-composite, 0.7Vp-p ± 2 dB, positive

Sync signal is ± 0.3 Vp-p tri-level bipolar sync or 0.3Vp-p sync negative.

B, R: Non-composite, 0.7Vp-p ± 2 dB, positive

Y: Composite, 1.0Vp-p ± 2 dB or non-composite, 0.7Vp-p ± 2 dB

Sync signal is ± 0.3 Vp-p tri-level bipolar sync.

Pb, Pr: ± 0.35 Vp-p, sync signal is ± 0.3 Vp-p tri-level bipolar sync.

— Continued on next page —



HD PROJECTION HEAD
SONY®

7074

SYNC(HD): Composite sync or horizontal sync is $\pm 0.3\text{Vp-p}$ tri-level bipolar sync or $0.2\text{--}4\text{Vp-p}$ sync, positive/negative

(VD): Vertical sync is $0.2\text{--}4\text{Vp-p}$ sync, positive/negative

VIDEO IN

Y/C: 4-pin mini DIN connector

Y(luminance) signal: $1\text{ Vp-p} \pm 2\text{ dB}$, sync negative, 75 ohms terminated

C (chrominance) signal: burst $0.286\text{ Vp-p} \pm 2\text{ dB}$, 75 ohms terminated (NTSC) $0.3\text{ Vp-p} \pm 2\text{ dB}$, 75 ohms terminated (PAL)

VIDEO: BNC connector
Composite video input, 1 Vp-p , $\pm 2\text{ dB}$, sync negative, 75 ohms terminated

REMOTE 1 connector:

14-pin connector

REMOTE 2 connector:

9-pin connector

CONTROL S IN:

minijack 5Vp-p

Outputs

VIDEO OUT: BNC connector
Composite video output, $1\text{Vp-p} \pm 2\text{ dB}$, impedance 75 ohms , Outputs video signal from the VIDEO IN connector

CONTROL S OUT: minijack, 5 Vp-p

Power requirements

$220\text{--}240\text{ V AC}$, $50/60\text{ Hz}$

Power consumption

120V : 7.2A

$220\text{--}240\text{V}$: 4A

Dimensions

Approx. $743 \times 402 \times 998\text{mm}$ (w/h/d)
($29\frac{3}{8} \times 15\frac{7}{8} \times 39\frac{3}{8}$ inches)

Weight

Approx. 99 kg ($218\text{ lb } 4\text{ oz}$)

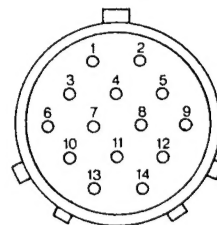
Accessories supplied

Remote Commander RM-1200 (1)
with 3 size AA(R6) batteries
Remote Commander cable (1)
AC power cord (1)
Handle kit (1 set)

Signal assignment

REMOTE 1 connector (14-pin)

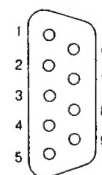
Pin No.	Signal
1	GND
2	HD/Composite Sync
3	SIRCS
4	NC
5	GND (SIRCS)
6	B/C
7	GND (B/C)
8	GND (G/Y)
9	G/Y
10	CONT (RGB/Video)
11	R/Composite Video
12	CONT (Composite Video/YC)
13	—
14	VD



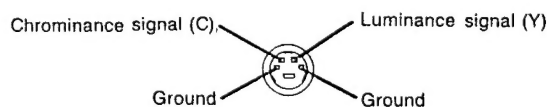
REMOTE 2 connector (D-sub, 9-pin)

Pin No.	Signal
1	Frame Ground
2	Transmit A
3	Receive B
4	Receive Common
5	Spare
6	Transmit Common
7	Transmit B
8	Receive A
9	Frame Ground

RS-422 format



Y/C connector (4-pin mini DIN)



Design and specifications are subject to change without notice.

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
1. GENERAL					
1-1.	Location and Function of Controls	5	3-2-6.	Bias Section	56
1-2.	Projecting	8	3-2-7.	Sync SEP Section	57
1-3.	Centering Adjustment	13	3-2-8.	Gain Control Section	57
1-4.	System Connection	14	3-2-9.	Ternary Sync Discriminating Circuit	58
1-6.	Installation Diagramas	15	3-2-10.	Audio Section	58
1-7.	Dimensions	17	3-2-11.	Sircs Signal	58
1-8.	Polarity Change	18	3-2-12.	Clear BlueCircuit	59
1-9.	Attaching The Handles and Projector Suspension Support	20	3-2-13.	Test Signal Generator	59
1-10.	On-Screen Display and The Internal Test Patterns	21	3-2-14.	Pluge Signal Generator	60
1-11.	Page Display	22	3-3.	Circuit Boards CA (RG) and CA (B)	60
1-12.	Adjustment Procedure	24	3-3-1.	Signal Processing	60
1-13.	Settings for Adjustments	24	3-3-2.	Video Output Amplifier	61
1-14.	Focus Adjustment	26	3-3-3.	Final-Stage Clamp Circuit	61
1-15.	Registration Adjustment	28	3-3-4.	Automatic Background Circuit (Only the RED CH is explained here, but the explanation is applicable to other CH as well.)	61
1-16.	White Balance Adjustment	36	3-3-5.	Single Tube ABL Circuit	61
1-17.	Other Adjustment	38	3-3-6.	Peak ABL Circuit	61
1-18.	Memory of Adjustments Data	40	3-3-7.	ABL Circuit	61
1-19.	Making The Adjustment Keys Inperable	41	3-3-8.	G1 Blanking Circuit	61
1-20.	Data Reset	41	3-4.	Circuit Board DA	62
1-21.	For Reference-The Memory Architecture	43	3-4-1.	AFC Circuit System	62
			3-4-2.	Regeneration Waveform Generator	63
2. DISASSEMBLY			3-4-3.	Others	64
2-1.	Lens Removal	45	3-5.	Circuit Board DB	66
2-2.	High Voltage Current Block Assembly Removal	46	3-6.	Circuit Board DC	67
2-3.	CRT Removal	46	3-6-1.	V.Out Circuitry	67
2-4.	M1, M2, M3B Boards Removal	47	3-6-2.	Sub Out Circuitry	68
2-5.	ED Block Assembly, YD Block, DE Block Removal	47	3-7.	Circuit Board DD	69
2-6.	BB, QHD Boards Removal	48	3-7-1.	Generation of H.Parabolic Sine Wave for Magnet Focus	69
2-7.	BM, DM Boards Removal	48	3-7-2.	Zone Correction Wave Generation	69
			3-8.	DE Board	71
3. CIRCUIT DESCRIPTIONS			3-8-1.	Operations	71
3-1.	Circuit Board BA	49	3-8-2.	Digital Attenuator (IC510-IC536)Allocation	73
3-1-1.	Y Signals	49	3-9.	E Board	74
3-1-2.	Chrominance Signals	50	3-9-1.	F-V Conversion	75
3-1-3.	IC004 (TDA2595)	52	3-9-2.	Negative Power Section	75
3-1-4.	IC009 (CX7916)	53	3-9-3.	Pin Mod Section	75
3-1-5.	IC003 (CXA1216P)	53	3-9-4.	H-Drive Section	75
3-1-6.	IC007 (TC74HC27AP)	54	3-9-5.	H-Size Feed Back Section	76
3-2.	Circuit Board BB	54	3-9-6.	HD Output Section and H.Stop Protector Section	76
3-2-1.	RGB Input (Video Section)	54	3-10.	Circuit Board EB (R, G, AND B)	77
3-2-2.	Video Input (Video Section)	54	3-11.	Circuit Board L	79
3-2-3.	Sync Section	55	3-11-1.	Lens Focus Drive Circuit	79
3-2-4.	Sync on Green	55	3-11-2.	Code Display	79
3-2-5.	AMP Section	56	3-11-3.	Internal Timer	80

<u>Section</u>	<u>Title</u>	<u>Page</u>
3-12.	Circuit Board Sops-1008	81
3-12-1.	C2 Board (Control Board)	81
3-12-2.	M2 Board	81
3-12-3.	C1 Board (Control Board)	82
3-12-4.	M1 Board	82
3-13.	Circuit Board PA and Circuit Board PB	82
3-13-1.	High-Voltage Generator	82
3-13-2.	HV Regulator	83
3-13-3.	High Voltage Protector	83
3-13-4.	Internal Protector	84
3-14.	Circuit Board QHD	84
3-14-1.	Input Switching	84
3-14-2.	YPBP _R Conversion Matrix Circuit	84
3-14-3.	Aperture Control Circuit	85
3-14-4.	Sync Interface Circuit	86
3-15.	Circuit Board Y	88
3-15-1.	Power Supply Block (PS1, PS2, D1, D2)	88
3-15-2.	CPU Block	88
3-15-3.	Sires Block	88
3-15-4.	I/O Port Block	88
3-15-5.	fH / fV Detect Block (IC12)	88
3-15-6.	Sync Block	88
3-15-7.	Character Generator / Internal Signal Generator Block	89

4. SET-UP ADJUSTMENTS

4-1.	Neck Assembly Setting	90
4-2.	Main Deflection Yoke Adjustment	90
4-3.	Sub-Deflection Yoke Adjustment	90
4-4.	Magnet Focus Coil Adjustment	91
4-5.	2-Pole and 4-Pole Magnet Adjustment	91
4-6.	Green Focus Adjustment	91
4-7.	Red Focus Adjustment	92
4-8.	Blue Focus Adjustment	92
4-9.	Centering Adjustment	92
4-10.	Green Picture Adjustment	92
4-11.	Red-Green Registration Adjustment	94
4-12.	Blue-Red Registration Adjustment	95
4-13.	White Balance Adjustment	96

<u>Section</u>	<u>Title</u>	<u>Page</u>
5.	SAFETY RELATED ADJUSTMENTS	99

6. CIRCUIT ADJUSTMENTS

6-1.	BA Board Adjustment	103
6-2.	BB Board Adjustment	104
6-3.	E Board Adjustment	105
6-4.	DA Board Adjustment	106

7. DIAGRAMS

7-1.	Block Diagrams	107
7-2.	Fram Schematic Diagrams	121
7-3.	Circuit Boards Location	124
7-4.	Schematic Diagrams and Printed Wiring Boards ..	125
7-5.	Semiconductors	251

8. EXPLODED VIEWS

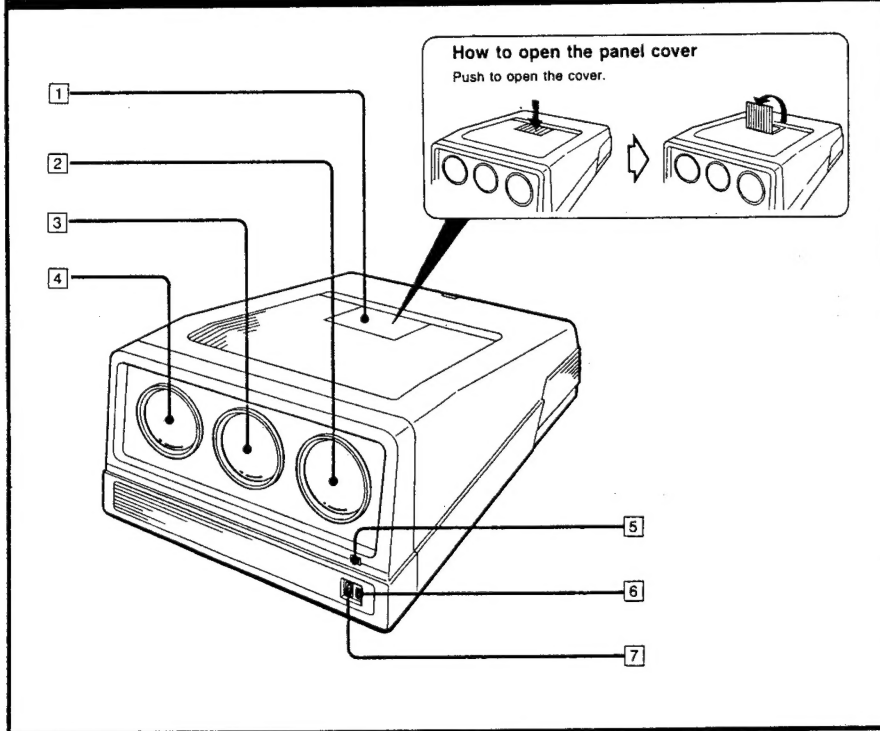
8-1.	Case, Lens	254
8-2.	Chassis 1	255
8-3.	Picture Tube	256
8-4.	Chassis 2	257

9.	ELECTRICAL PARTS LIST	258
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SECTION 1 GENERAL

1-1. LOCATION AND FUNCTION OF CONTROLS

Front



1 Control panel

The keys inside the panel cover are the same as the Remote Commander.

2 Red lens

3 Green lens

4 Blue lens

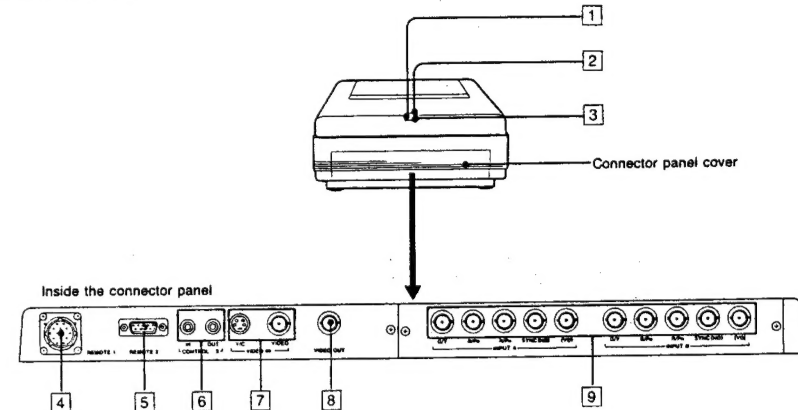
5 Front remote control detector

6 MAIN POWER switch (| On/ O Off)

7 AC IN socket
Connect the supplied AC power cord (mains lead).

Rear

To open the connector panel cover, see "How to open the connector panel cover".



1 Rear remote control detector

2 POWER indicator

Green indicator is on when the power is turned on.

3 STANDBY indicator

When the MAIN POWER is on, the red light indicating standby will be on. When the red light is on, the projector can be controlled with the Remote Commander.

Note

When the MAIN POWER is turned off, there will be a slight delay before the red light goes off.

4 REMOTE 1 connector (14-pin)

For future use.

5 REMOTE 2 connector (9-pin)

For future use.

6 CONTROL S IN/OUT connectors

Connect to the CONTROL S connectors of other Sony equipment. It is then possible to control the whole system with a single Remote Commander.

CONTROL S IN: Connect to the CONTROL S OUT of the Remote Commander to be used as a wired Commander.

7 VIDEO IN connectors

Y/C (4-pin): Connect to the Y/C output of a VCR.

VIDEO (BNC type): Connect to the video output of a video equipment.

Note

The VIDEO connector is disconnected automatically when a cable is connected to the Y/C connector.

8 VIDEO OUT connector (BNC type)

Loop-through output of the VIDEO connector. Connect to the video input of a VCR or another monitor.

Note

The signal input from Y/C connector is not output from this connector.

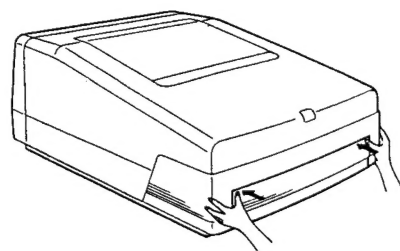
9 INPUT A/B connectors (BNC type)

G/Y, B/Pb, R/Pr, SYNC (HD), (VD):

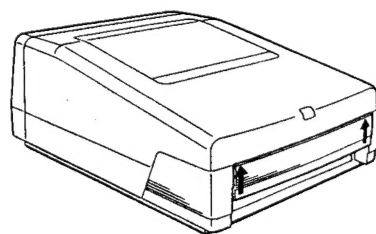
Connect to the G/Y, B/Pb, R/Pr, SYNC (HD), (VD) outputs of high definition video products (BTA S-001 or SMPTE 240M standard) such as HDL-2000 videodisc player.

How to open the connector panel cover

1 Push to open the cover.

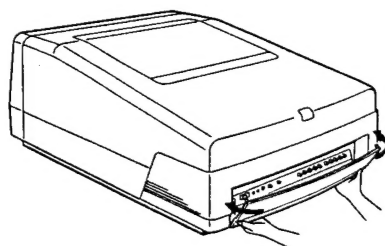


2 Slide the cover upward as far as it can go.



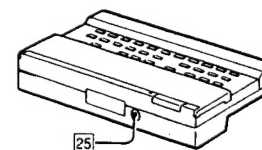
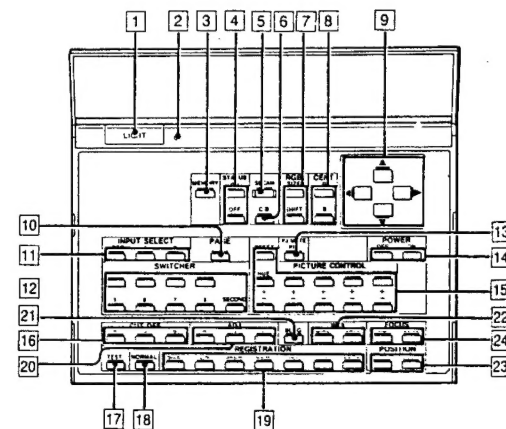
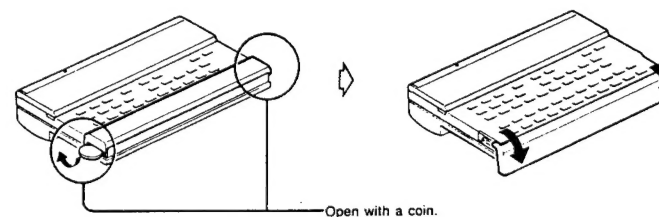
How to detach the panel cover

Bend the cover until it is detached.



Remote Commander RM-1200

The adjustments key are covered with the panel in order to prevent the user from changing the registration adjustments. First remove the panel cover.

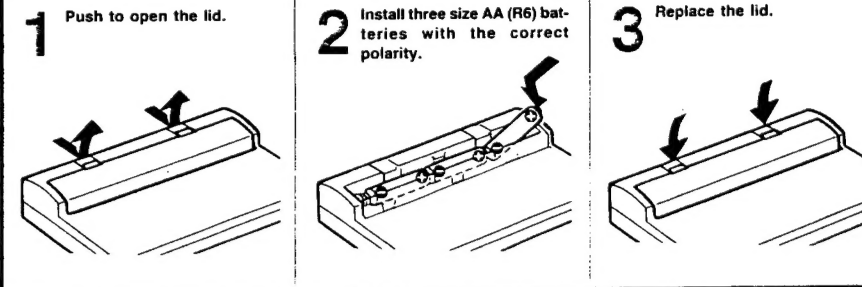


- 1 LIGHT button**
Press to illuminate the indications on the Commander. The light will go off in about 10 seconds after any operation.
- 2 Indicator**
Lights up when any of the keys on the Commander is pressed. If the indicator does not light, battery replacement is required.
- 3 MEMORY key**
Press to store the adjusted data.
- 4 STATUS ON/OFF key**
Press OFF key to clear the on-screen display. However, PAGE will be displayed even when in OFF mode. Press ON key to restore the on-screen display.
- 5 SECAM key**
Press when the color of a picture from SECAM color source is incorrect. Press again to switch over to other standard system source, NTSC or PAL.
- 6 C.B. (Clear Blue) key**
Press to make the blue color clear in the picture input from INPUT A/B connectors. Press again to restore the normal condition.
- 7 RGB SIZE/SHIFT keys**
Press to adjust the picture input from INPUT A/B connectors. SIZE: Press to enter the size adjustment mode.
The size adjustment of the picture is performed using the four arrow keys.
◀ to reduce horizontal size
▶ to expand horizontal size
▲ to expand vertical size
▼ to reduce vertical size
SHIFT: Press to enter the shift adjustment mode.
The shift adjustment of the picture is performed using the four arrow keys. The picture shifts according to the direction of the arrow.
- 8 CENT R/B keys**
Press for centering adjustments of the red or blue.
R: Press to enter the red centering adjustment mode.
B: Press to enter the blue centering adjustment mode.
To enter the green centering adjustment mode, press CENT R key and B key simultaneously. The centering adjustments are performed using the four arrow keys.
- 9 Arrow keys**
Used for various adjustments functions.
- 10 PAGE key**
Press to display and switch the following five on-screen displays. (On PAGE 1, 2, 3 and 4, adjustment can also be done.)
PAGE 1: Displays STATUS ON/OFF, PIC MUTE ON/OFF, CLEAR BLUE ON/OFF, and SECAM ON/OFF.
PAGE 2: Displays the picture conditions; contrast, color, brightness, sharpness and hue levels.
PAGE 3: Displays the selected MEMORY number.
PAGE 4: Displays the color temperature, input signal, color selection, sync source selection.
PAGE 5: Displays the input signal informations; fh, fv, H/C-sync, V-sync, Sync on Green, and input signal.
- 11 INPUT SELECT keys**
Press to select the signal input.
VIDEO: to select the signal input from VIDEO IN (Y/C or VIDEO) connectors
A: to select the signal input from INPUT A connectors
B: to select the signal input from INPUT B connectors

- 12 SWITCHER keys**
For future use.
Note
If you have pressed a number key by mistake while projecting a picture, the input channel will be switched and the input signal will be cut off.
To restore the picture, press the INPUT SELECT key (VIDEO, A or B) of the input signal to be projected.
- 13 PJ MUTE PIC key**
Press to darken the screen. To restore the previous brightness level, press PIC again or CONTR + key.
- 14 POWER ON/OFF keys**
Press to turn on and off the projector.
- 15 PICTURE CONTROL keys**
Press to adjust picture conditions; hue, sharpness, brightness, color, and contrast.
Press RESET key to restore the factory preset levels.
- 16 CUT OFF R/G/B keys**
Press to select the color to be turned off when adjusting the registration.
R Red signal
G Green signal
B Blue signal
To restore the color, press the key again.
- 17 TEST key**
Press to display the internal test patterns. Each press of this key displays 7 patterns sequentially. Appropriate patterns will be displayed in registration, white balance and focus adjustments modes.
- 18 NORMAL key**
Press to cancel a test pattern or adjustment mode.
- 19 REGISTRATION keys**
SIZE/LIN/SKEW/BOW/KEY/PIN/ZONE
Press to select the desired item for registration adjustment. The registration adjustments are performed using the four arrow keys, ADJ keys and POSITION +/- keys.
- 20 ADJ R/G/B (Adjust red/green/blue) keys**
Press to select the color to be adjusted when adjusting the registration, white balance and focus adjustment.
R Red signal
G Green signal
B Blue signal
- 21 BLKG (Blanking) key**
Press to enter the blanking adjustment mode. The blanking portion can be adjusted using four arrow keys.
- 22 W/B (White balance) key**
Press to enter the white balance adjustment mode.
BIAS For cut off adjustment
GAIN For drive adjustment
- 23 POSITION +/- keys**
Used for zone, blanking and magnetic focus adjustments.
- 24 FOCUS MG/LENS keys**
Press to enter the focus adjustment modes.
MG For magnetic focus adjustment
LENS For lens focus adjustment
- 25 CONTROL S OUT connector**
Connect the supplied cable to this connector and to CONTROL S IN connector of the projector for wired Commander application.

You can perform all the adjustments with the supplied Remote Commander RM-1200. RM-1200 can be used both as a wireless Commander and as a wired Commander. When adjusting we recommend you to use it as a wired Commander so that you can concentrate on the screen.

Battery installation

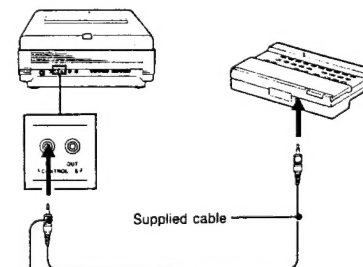


Notes

- If the projector does not operate properly, the batteries might be worn out. Replace all three of them with new batteries.
- The life of the batteries depends on frequency of usage how often you use the LIGHT button. If they wear out quickly, replace them with new alkaline batteries.
- To avoid damage from possible battery leakage, remove the batteries when the Commander will not be used for a long time.

- Be sure that there are no obstructions between the Commander and the set.
- Operable range is limited.
The shorter the distance between the Commander and the projector, the wider the angle within which the Commander can control the projector.

To connect the Remote Commander to the projector



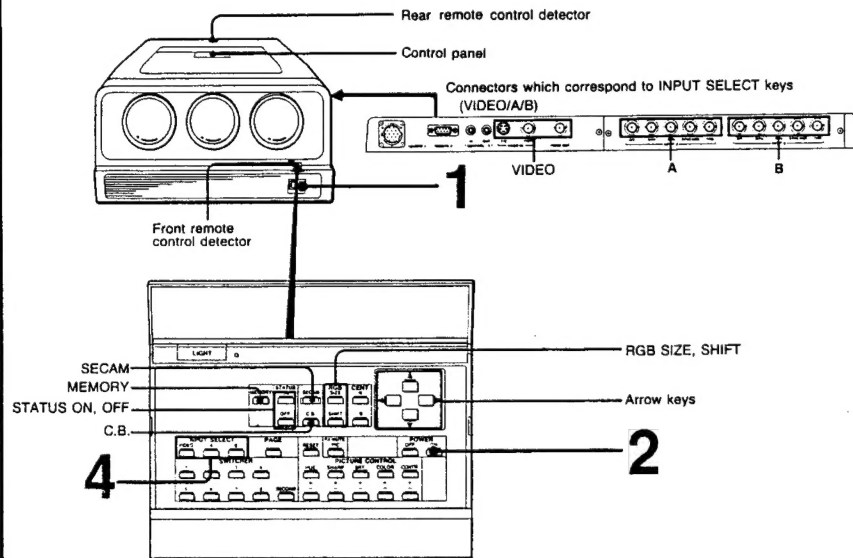
Notes

- When the connection is made, the remote control detectors of the projector will not function.
- For wireless operation, make sure to disconnect both plugs after the wired Commander.

Turn the screw clockwise to fix the plug on the CONTROL S IN connector of the projector.

1-2. PROJECTING

The keys on the control panel of the projector are the same as those found on the Remote Commander.



1 Turn the MAIN POWER of the projector on (|).

2 Turn the power on by pressing the POWER ON key of the Remote Commander or the control panel of the projector.

3 Turn on the connected equipment.

4 Select the input signal to be projected by pressing INPUT SELECT key (VIDEO, A or B).

VIDEO: to select the signal input from VIDEO IN connectors
A: to select the signal input from INPUT A connectors
B: to select the signal input from INPUT B connectors

5 Adjust the picture.

To cut the on-screen display

Press STATUS OFF. However, PAGE will be displayed even when in OFF mode. "OFF" indication will be displayed if a key is pressed when in OFF mode. ("OFF" will be displayed in green if the key functions, and in yellow if the key does not function.) To restore the on-screen display, press STATUS ON.

To darken the screen (PIC MUTE)

Press PJ MUTE PIC key. To restore the previous brightness level, press PJ MUTE PIC key again or CONTR + key.

Notes on projecting a signal from INPUT A/B connectors

- If necessary, adjust the size and shift of the picture using the RGB SIZE/SHIFT and arrow keys.
- To make the blue color clear, press C.B. (CLEAR BLUE ON). Press again to restore the normal condition (CLEAR BLUE OFF).

If the color of the picture is incorrect

When the input signal is from INPUT A/B connectors
Display PAGE 4 by pressing PAGE key, then check that the INPUT SIGNAL setting (GBR/YPaPr) is correct.

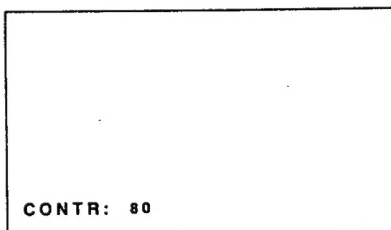
When the input color source is SECAM

Press SECAM key (SECAM ON). Press again to switch over to other standard system sources, NTSC or PAL (SECAM OFF).

If you wish to store the SECAM ON/OFF or C.B. ON/OFF setting, store the data.

Adjusting the Picture:

Use the PICTURE CONTROL keys on the Remote Commander.
The adjustment levels are digitally displayed on the screen having a range of MIN, 1, 2, ..., 98, 99, MAX.



CONTR +/- keys: +: to increase picture contrast
-: to decrease picture contrast
COLOR +/- keys: +: to make color intensity vivid
-: to make color intensity pale
BRT +/- keys: +: to make the picture brighter
-: to make the picture darker
SHARP +/- keys: +: to make the picture sharper
-: to make the picture softer
HUE +/- keys: +: to make skin tones greenish
-: to make skin tones purplish

- COLOR and HUE controls do not function on the input signal from INPUT A/B connectors.
- HUE control does not function with PAL or SECAM color source.

To restore the factory preset levels

Press RESET key. The factory preset levels will be displayed on the screen. The following are the factory preset levels of each input signal.

■Input signal from INPUT A/B

```
PIC CONTROL
data reset
CONTR: 80
COLOR: --
BRT: 50
SHARP: MIN
HUE: --
```

"--" indicates that the control does not function on the input signal.

■NTSC (VIDEO) input signal

```
PIC CONTROL
data reset
CONTR: 80
COLOR: 50
BRT: 50
SHARP: 50
HUE: 50
```

■PAL/SECAM (VIDEO) input signal

```
PIC CONTROL
data reset
CONTR: 80
COLOR: 50
BRT: 50
SHARP: 50
HUE: --
```


Displaying the Current Control Settings and Conditions

Press PAGE key for displaying the following four on-screen displays. Adjustment can also be done on PAGE 1, 2, 3 and 4. The displays will switch as illustrated on the right every time PAGE key is pressed.

The displays in these illustrations are for INPUT A/B. When in VIDEO mode, the adjustable items are slightly different from the displays in these illustrations.

PAGE 1 → PAGE 2 → PAGE 3 → PAGE 4 → PAGE 5

Original screen ←

PAGE 1

PAGE 1 INPUT-A
USER PRESET
STATUS: ON
PIC MUTE: OFF
CLEAR BLUE: OFF
SECAM: ---
NEXT: [PAGE]

The STATUS ON/OFF, PIC MUTE ON/OFF, CLEAR BLUE (C.B.) ON/OFF, and SECAM ON/OFF settings are displayed. " --- " indicates that the control does not function with the current input signal.
To change the settings, adjust with the appropriate key.

Note
CLEAR BLUE control does not function when in VIDEO mode.

PAGE 2

PAGE 2 INPUT-A
USER CONTROL
CONTR: 80
COLOR: --
BRT: 50
SHARP: MIN
HUE: --
NEXT: [PAGE]

The picture conditions; contrast, color, brightness, sharpness, and hue levels are displayed. " --- " indicates that the control does not function with current input.
To change the levels, adjust with PICTURE CONTROL keys.

Notes
•COLOR and HUE controls function with NTSC color source.
•HUE control does not function with PAL or SECAM color source.

PAGE 3

PAGE 3 INPUT-A
MEMORY PRESET
MEMORY-1 MEMORY-5
MEMORY-2 MEMORY-6
MEMORY-3 MEMORY-7
MEMORY-4 MEMORY-8
SELECT: [] [] [] []
NEXT: [PAGE]

The MEMORY numbers are displayed.
The number being selected blinks in green.
To select the MEMORY number, press ◀, ▶, ▲ or ▼.

When the aspect ratio of the picture is 16:9, select MEMORY 1. When the aspect ratio of the picture is 4:3, select MEMORY 8. The standard registration data are preset in these two positions.
MEMORY 2-7 are for dealer use to store their own registration data.

The aspect ratio of the picture (16:9 or 4:3) is factory preset for each MEMORY number:

MEMORY 1 — 6: aspect ratio 16:9 (For INPUT A/B)
MEMORY 7 — 8: aspect ratio 4:3 (For VIDEO)

PAGE 4

PAGE 4 INPUT-A
SYSTEM PRESET
COLOR TEMPERATURE:
HDTV1 HDTV2 VID1 VID2
INPUT SIGNAL: GBR YP•Pr
COLOR SELECT: COL B&W
SYNC SOURCE: INT EXT
SELECT: [] [] [] []
NEXT: [PAGE]

The following settings are displayed:
The number being selected blinks in green.

COLOR TEMPERATURE:

The color temperature is set to HDTV 1, HDTV 2, VID 1 or VID 2.

HDTV 1: 6500K for aspect ratio 16:9
HDTV 2: 9300K for aspect ratio 16:9
VID 1: 6500K for aspect ratio 4:3
VID 2: 9300K for aspect ratio 4:3

When changing the setting, select the item which the aspect ratio is appropriate for the picture to be projected.

INPUT SIGNAL: The input signal is GBR or YPaPr.
COLOR SELECT: The color select setting is COL (color) or B&W (black & white)

SYNC SOURCE: The sync source is INT (internal) or EXT (external).

Notes

- "INPUT SIGNAL", "COLOR SELECT" and "SYNC SOURCE" are not displayed when the input signal is from VIDEO IN.
- "SYNC SOURCE" is displayed only when both internal and external sync signals are input.

To change the setting, adjust by pressing ◀, ▶, ▲ or ▼ keys. If you wish to keep the setting on PAGE 3 and 4, store the data

PAGE 5 **INPUT-A**
INPUT INFO
 fh : 33.7kHz
 fv : 59.9Hz
 H/C-SYNC: NEG
 V-SYNC: NEG
 SYNC ON G: NEG
 INPUT SIGNAL: GBR
 EXIT: [PAGE]

The signal input conditions are displayed.

fh: The horizontal frequency of the input signal
 fv: The vertical frequency of the input signal

H/C-SYNC: The polarity of the H/C-SYNC
 V-SYNC: The polarity of the V-SYNC
 SYNC ON G: The polarity of the SYNC on the Green

POS: positive
 NEG: negative
 ---: not input

The sync signal being used is indicated in green, and the one not being used is indicated in white.

INPUT SIGNAL: The current input signal.

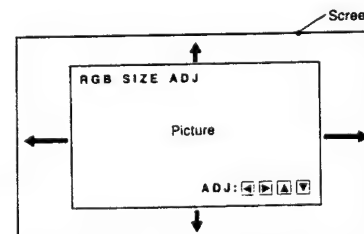
GBR: GBR signal from INPUT A/B
 YPaPr: YPaPr signal from INPUT A/B
 NTSC: NTSC signal from VIDEO IN
 PAL: PAL signal from VIDEO IN
 SECAM: SECAM signal from VIDEO IN
 B&W: black and white signal from VIDEO IN
 Y/C: Y/C signal from VIDEO IN

RGB SIZE and SHIFT Adjustments (For INPUT A/B only)

If necessary, adjust the size and shift of the picture using the RGB SIZE/SHIFT and arrow keys.
 This adjustment functions only with input signal from INPUT A or B connectors.

RGB SIZE adjustment

If size of the picture does not fit the screen, adjust RGB SIZE.



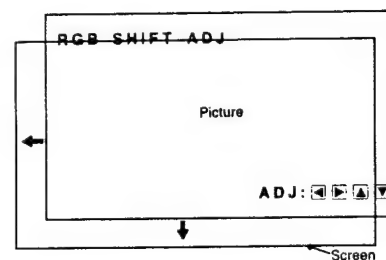
1 Press RGB SIZE key.

2 Adjust by pressing arrow keys so that the picture fits the screen.

- ◀ to reduce horizontal size
- ▶ to expand horizontal size
- ▲ to expand vertical size
- ▼ to reduce vertical size

RGB SHIFT adjustment

If the picture needs to be shifted to fit the screen, adjust RGB SHIFT.



1 Press RGB SHIFT key.

2 Adjust by pressing arrow keys so that the picture fits the screen.
 The picture shifts according to the direction of the arrow.

If you wish to keep the current adjustment setting, store the data.

After the RGB SIZE/SHIFT adjustment, press the selected INPUT SELECT key (A or B) to cut the on-screen display.

Resetting RGB SIZE/SHIFT to factory preset condition

1 Press RGB SIZE or SHIFT key.

2 Press ◀ and ▶ keys simultaneously.
The following on-screen display appears on the screen.

RGB SIZE ADJ
RGB SIZE
DATA RESET MODE
Do you wish to return to
factory preset data?
YES: ▲
NO: ▼

3 To restore the factory preset condition, press ▲ key.
The following on-screen display appears to confirm that resetting was completed.

To keep the current setting instead of resetting, press ▼ key.

RGB SIZE ADJ
RGB SIZE
DATA RESET MODE
Reset complete!

Messages on the Screen

The meaning of the color

Four colors are used in the letters of on-screen display.

Color	Meaning
Green	Function and condition, item being selected on PAGE display
Cyan	Operation guide and messages
Yellow	Caution and error messages
White	Item being adjusted, item not being selected on PAGE display

Error message

When you perform an error in operation, the following messages will be displayed.

Messages	Meaning
Not applicable!	The control does not function with the current input.
PIC MUTE	PIC MUTE is set to ON. If you want to adjust the picture controls, press PJ MUTE PIC key to cancel the PIC MUTE mode.
Overflow!	RGB SIZE/SHIFT and CENT R/B adjustment range limit has been reached.
NO INPUT	No signal is input in the selected input mode.
OFF	STATUS is set to OFF to cut the on-screen display. To restore the on-screen display, press STATUS ON.

Storing the Adjustment Data

If you wish to save the picture adjustment changes, you must store them in memory. The following conditions can be stored:

- SECAM ON/OFF setting
- CLEAR BLUE (C.B.) ON/OFF setting
- The adjustment data of RGB SIZE
- The adjustment data of RGB SHIFT
- The setting data of PAGE 3; MEMORY numbers
- The setting data of PAGE 4
 - COLOR TEMPERATURE (HDTV 1/HDTV 2/VID 1/VID 2)
 - INPUT SIGNAL (GBR/YPbPr)
 - COLOR SELECT (COL/B&W)
 - SYNC SOURCE (INT/EXT)

1 After the adjustment, press MEMORY key.
The following on-screen display appears to indicate that storing has begun. While the display is on, no other keys will function.

MEMORY DATA
in saving!

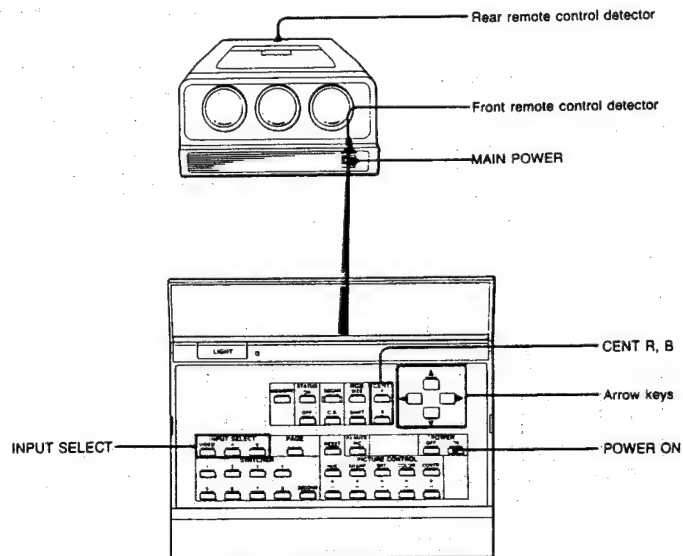
No key may be applicable during the indication of this mode.

2 The following on-screen display appears to confirm that storing has been completed.

MEMORY DATA
saving is
complete!

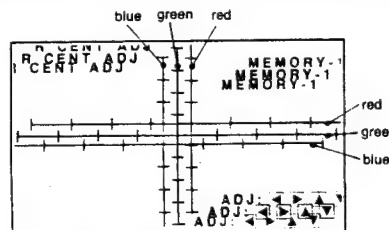
1-3. CENTERING ADJUSTMENT

The three colors red, green and blue must converge for proper projection. If they do not converge, centering adjustment is necessary.

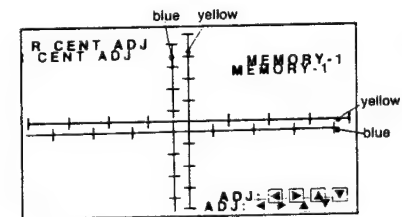


1 Turn the MAIN POWER switch of the projector on () and press POWER ON key of the Remote Commander.

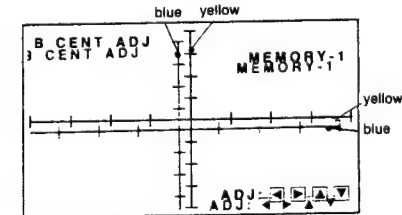
2 Press CENT R key. The built-in cross hair test pattern will be displayed and the red line will be operable.



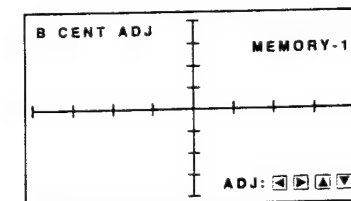
3 Press arrow keys to move the red line so that the red and green lines converge. The red line will move according to the direction of the arrow.



4 Press CENT B key. The built-in cross hair test pattern will be displayed and the blue line will be operable.



5 Press arrow keys to move the blue line so that the blue, green and red lines converge. When all three color lines converge, the test pattern will be seen as white.



6 Press the selected INPUT SELECT key (VIDEO, A or B) to exit the test pattern mode.

1-4. SYSTEM CONNECTION

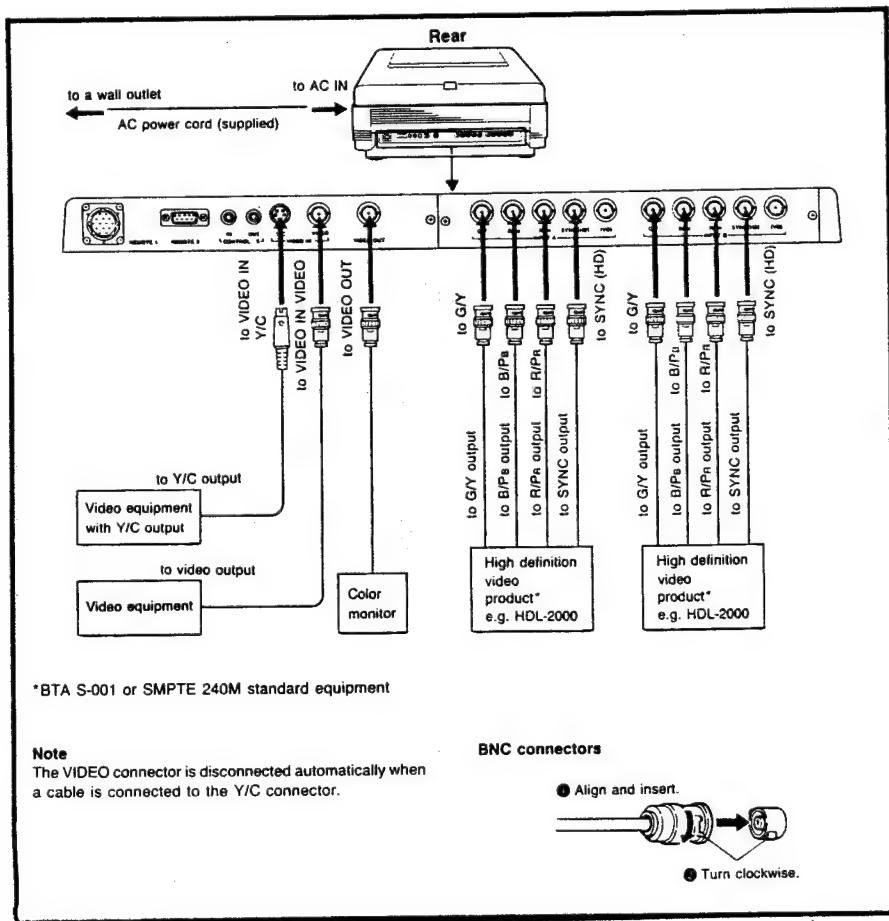
Notes on connection

- First make sure that the power to each piece of equipment is turned off.
- Use connecting cables suitable for the equipment to be connected.
- The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- To disconnect the cable, pull it out by grasping the plug. Never pull the cable itself.
- Read the instruction manual of the equipment to be connected.

1-5. THIS PROJECTOR AND ADJUSTABLE PROJECTION SIZES

Model	Adjustable projection size (inch)	Factory set size (inch)
HDIH-1200M	100 — 130	120

- The projection size is measured diagonally.
- The aspect ratio is 16:9 (the standard size of HDTV).



1-6. INSTALLATION DIAGRAMS

Projection Size

For when screen is primarily for HDTV use (16:9)

■ HDIH-1200M

Unit: mm (inch)

Projection size (inch)	16:9		4:3
	height	width	width
100	1,245 (49.0)	2,215 (87.0)	1,660 (65 1/2)
110	1,370 (54.0)	2,435 (96.0)	1,830 (72.0)
120	1,495 (59.0)	2,660 (104 1/2)	1,995 (78 1/2)
130	1,620 (63 1/2)	2,880 (113 1/2)	2,160 (85.0)

For when screen is primarily for VIDEO use (4:3)

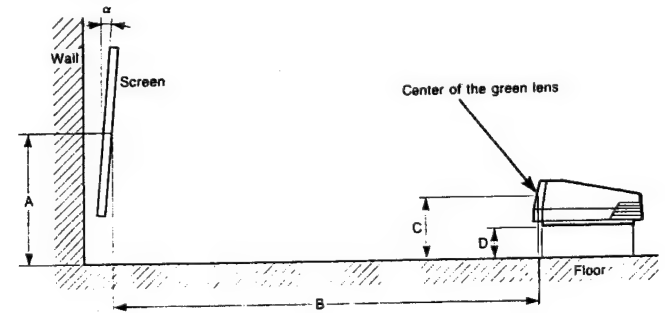
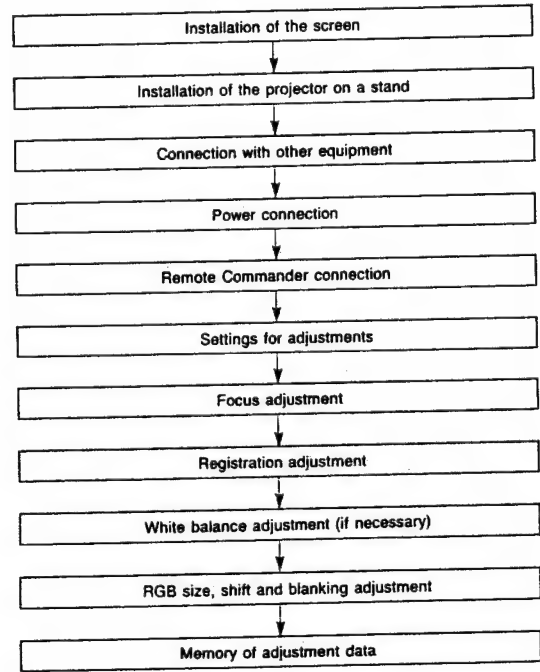
■ HDIH-1200M

Unit: mm (inch)

Projection size (inch)	4:3		16:9
	width	height	height
100	2,030 (80.0)	1,525 (90.0)	1,145 (67 1/2)
110	2,235 (88.0)	1,675 (66.0)	1,260 (49 1/2)
120	2,440 (96.0)	1,830 (72.0)	1,371 (54.0)
130	2,640 (104.0)	1,980 (78.0)	1,490 (58 1/2)

Floor

Procedure



■ HDIH-1200M

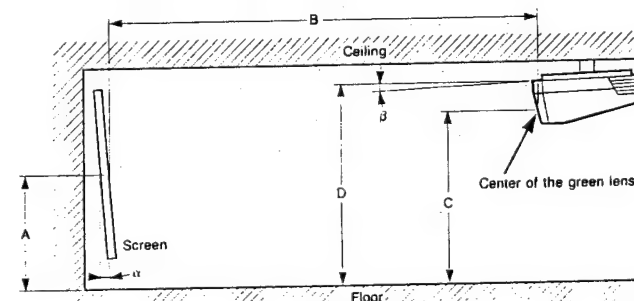
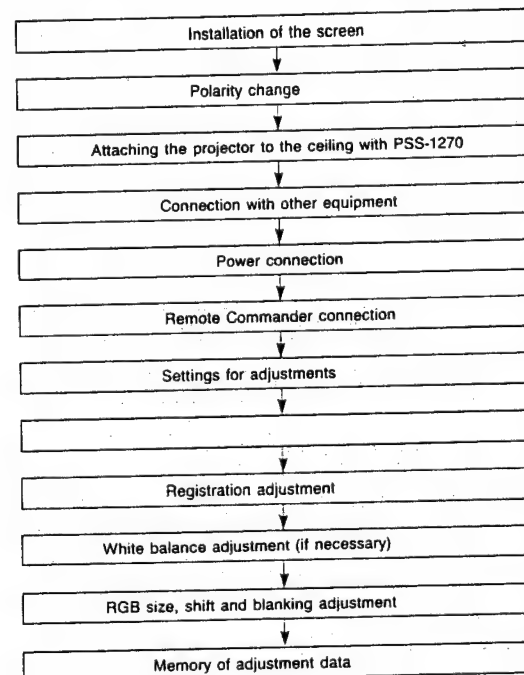
Unit: mm (inch)

	Projection size (inch)			
	100	110	120	130
A	1,250 (49.0)	1,320 (52.0)	1,400 (55.0)	1,450 (57.0)
B	3,150 (124.0)	3,450 (136.0)	3,750 (147.0)	4,050 (159 1/2)
C	550 (21 1/2)	←	←	←
D	260 (10.0)	←	←	←
α°	+5	←	←	←

: Refer to the supplied Installation Diagrams in 1/20 Scale.

Ceiling

Procedure



1-7. DIMENSIONS

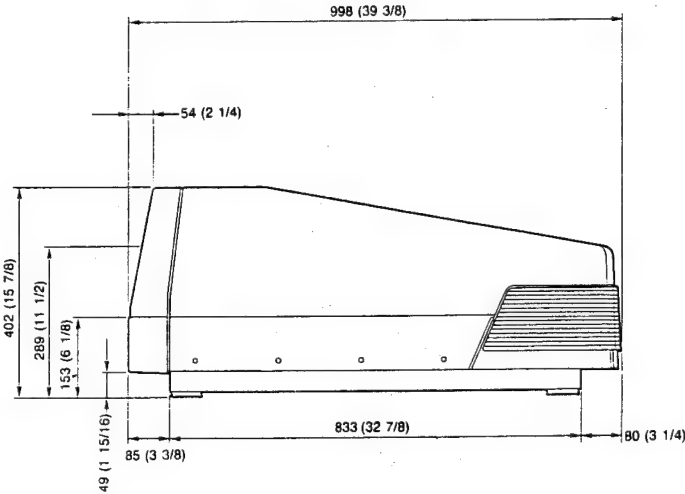
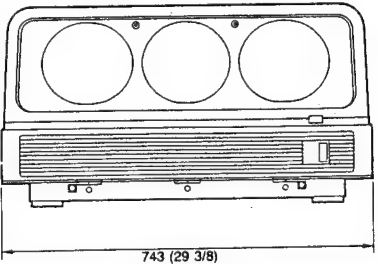
■ HDIH-1200M

Unit: mm (inch)

	Projection size (inch)			
	100	110	120	130
A	1,650 (65)	1,600 (63)	1,550 (61)	1,490 (58 1/2)
B	3,200 (126)	3,500 (137 1/2)	3,800 (149 1/2)	4,100 (161 1/2)
C	2,550 (88 1/2)	←	←	←
D	2,360 (93)	←	←	←
α°	-4	←	←	←
β°	+2	←	←	←

: Refer to the supplied Installation Diagrams in 1/20 Scale.

Unit: mm (inch)

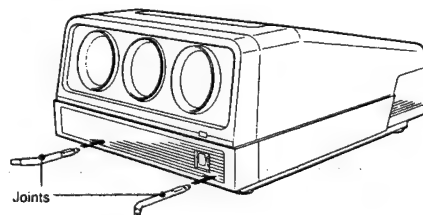


1-9. ATTACHING THE HANDLES AND PROJECTOR SUSPENSION SUPPORT

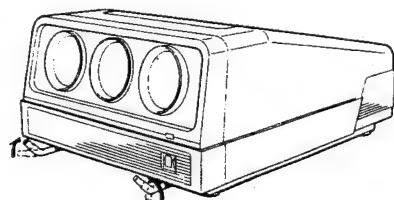
Attaching the Supplied Handles:

The supplied handles can be attached to the front and rear of the projector for carrying.

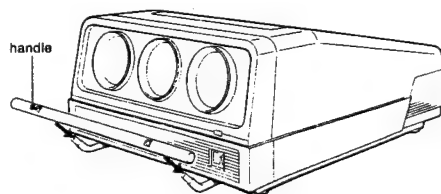
- 1 Insert the joints with the curved portion toward you to the square holes of the projector as far as they can go.



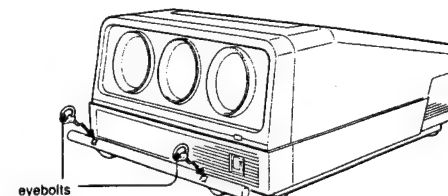
- 2 After inserting the joints, turn them upward by 90 degrees. Then try to pull the joints to confirm that they are fixed and cannot be pulled out.



- 3 Attach the handle to the joints.



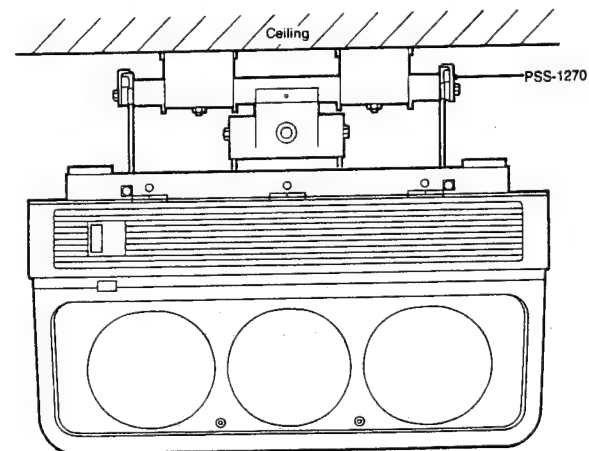
- 4 Fasten with the eyebolts.



- 5 Repeat the above steps for attaching the handle at the rear of the projector.

Attaching the set to the ceiling:

Use the PSS-1270 projector suspension support (optional) to attach the unit to the ceiling. For details, see the instruction manual of the PSS-1270.



1-10. ON-SCREEN DISPLAY AND THE INTERNAL TEST PATTERNS

Messages on the Screen

Color of message

Four colors are used in the screen display.

Color	Meaning
Green	Function and condition, item being selected on PAGE display
Cyan	Operation guide and messages
Yellow	Caution and error messages
White	Item being adjusted, item not being selected on PAGE display

Error message

When an error occurs, the following messages will be displayed.

Message	Meaning
Not applicable!	The control does not function with the current input.
PIC MUTE	PIC MUTE is set to ON. If you want to adjust the picture controls, press PJ MUTE key to cancel the PIC MUTE mode.
Overflow!	Adjustable range had reached its limit.
NO INPUT	No signal is input in the selected input mode.
OFF	STATUS is set to OFF to clear the on-screen display. To restore the on-screen display, press STATUS ON.

Test Patterns

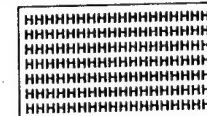
In each adjustment mode, an appropriate test pattern will be displayed. In addition, other test patterns (10 patterns) can be displayed by pressing TEST key.

All the Test Patterns

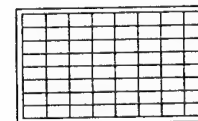
1 Cross Hair pattern



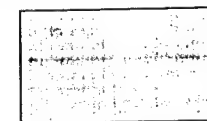
6 H pattern



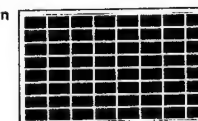
2 Hatch pattern



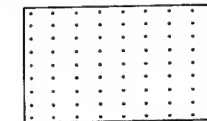
7 Inverted H pattern



3 Inverted Hatch pattern



8 Dot pattern



4 Hatch (coarse) pattern



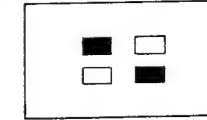
9 Window pattern



5 Flat Field

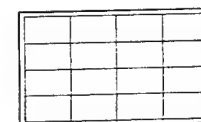


10 Plug pattern



Note

In the hatch and the cross-hair patterns, the lines of the right and lower portion will cross over the ninth (fifth) lines.

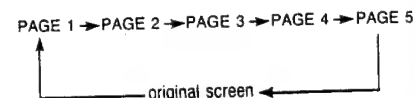


Test Patterns in Each Mode

Mode			With one press of TEST key, test patterns change as follows.
No adjustment mode			<pre> Flat Field → Hatch → Inverted Hatch → H-pattern ↑ Pluge ←----- Window ←----- Dot </pre>
FOCUS	LENS		<pre> H-pattern → Inverted H-pattern → Hatch ↑ Dot ←----- Inverted Hatch (Select the desired one) </pre>
	MG		
Centering	R CENT		<pre> Cross hair ↔ Hatch (Select the desired one) </pre>
	B CENT		
Registration	SIZE LIN SKEW BOW		<pre> Cross hair ←•→ Hatch (Select the desired one) </pre>
	KEY PIN		<pre> Hatch (Coarse) ↔ Hatch (Select the desired one) </pre>
	ZONE		Hatch
White balance	BIAS		Pluge
	GAIN		Window ↔ Flat Field
Blanking	BLKG		Input signal → Hatch

1-11. PAGE DISPLAY

Press PAGE key for displaying the following five on-screen displays. Adjustment can also be done on PAGE 1, 2, 3 and 4. The display will switch as illustrated on the right every time PAGE key is pressed: The displays in these illustrations are for INPUT A/B. When in VIDEO mode, the adjustable items are slightly different.



PAGE 1

```

PAGE 1          INPUT-A
USER PRESET
STATUS:      ON
PIC MUTE:    OFF
CLEAR BLUE:  OFF
SECAM:       ---
          
```

NEXT: [PAGE]

The STATUS ON/OFF, PIC MUTE ON/OFF, CLEAR BLUE (C.B.) ON/OFF, and SECAM ON/OFF settings are displayed. " --- " indicates that the control does not function with the current input signal. To change the settings, adjust with the appropriate key.

Note
CLEAR BLUE control does not function when in VIDEO mode.

PAGE 2

```

PAGE 2          INPUT-A
USER CONTROL
CONTR: 80
COLOR: --
BRT: 50
SHARP: MIN
HUE:  --
          
```

NEXT: [PAGE]

The picture conditions; contrast, color, brightness, sharpness, and hue levels are displayed. " -- " indicates that the control does not function with current input. To change the levels, adjust with PICTURE CONTROL keys.

Note
•COLOR and HUE controls function when the input signal is in VIDEO mode.
•HUE control does not function when the input signal is PAL or SECAM in VIDEO mode.

PAGE 3

PAGE 3 **INPUT-A**
MEMORY PRESET
MEMORY-1 **MEMORY-5**
MEMORY-2 **MEMORY-6**
MEMORY-3 **MEMORY-7**
MEMORY-4 **MEMORY-8**
SELECT: **◀ ▶ ▲ ▼**
NEXT: **[PAGE]**

The MEMORY numbers are displayed.
The selected number blinks in green.
To select the MEMORY number, press **◀**, **▶**, **▲** and **▼** keys.

The aspect ratio of the picture (16:9 or 4:3) is factory preset for each MEMORY number:
MEMORY 1—6: aspect ratio 16:9 (for INPUT A/B)
MEMORY 7, 8: aspect ratio 4:3 (for VIDEO IN)

When the aspect ratio of the picture is 16:9, select from MEMORY 1—6. When the aspect ratio of the picture is 4:3, select MEMORY 7 or 8.

PAGE 5

PAGE 5 **INPUT-A**
INPUT INFO
fh : 33.7kHz
fv : 59.9Hz
H/C-SYNC: NEG
V-SYNC: NEG
SYNC ON G: NEG
INPUT SIGNAL: GBR
EXIT: **[PAGE]**

The signal input conditions are displayed.

fh: The horizontal frequency of the input signal*
fv: The vertical frequency of the input signal*

H/C-SYNC: The polarity of the H/C-SYNC

V-SYNC: The polarity of the V-SYNC

SYNC ON G: The polarity of the SYNC on the Green

POS: positive
NEG: negative
---: not input

The sync signal being used is indicated in green, and the one not being used is indicated in white.

INPUT SIGNAL: The current input signal.

GBR: GBR signal from INPUT A/B

YPaPr: YPaPr signal from INPUT A/B

NTSC: NTSC signal from VIDEO IN

PAL: PAL signal from VIDEO IN

SECAM: SECAM signal from VIDEO IN

B&W: black and white signal from VIDEO IN

Y/C: Y/C signal from VIDEO IN

*The numbers are not always exact.

PAGE 4

PAGE 4 **INPUT-A**
SYSTEM PRESET
COLOR TEMPERATURE:
HDTV1 **HDTV2** **VID1** **VID2**
INPUT SIGNAL: GBR YPaPr
COLOR SELECT: COL B&W
SYNC SOURCE: INT EXT
SELECT: **◀ ▶ ▲ ▼**
NEXT: **[PAGE]**

The following settings are displayed:
The selected number blinks in green.

COLOR TEMPERATURE:

The color temperature is set to HDTV 1, HDTV 2, VID 1 or VID 2. Each item is factory preset as follows:

HDTV 1: 6500K for aspect ratio 16:9

HDTV 2: 9300K for aspect ratio 16:9

VID 1: 6500K for aspect ratio 4:3

VID 2: 9300K for aspect ratio 4:3

When changing the setting, select the item with the aspect ratio that is appropriate for the picture to be projected.

INPUT SIGNAL: The input signal is GBR or YPaPr.

COLOR SELECT: The color select setting is COL (COLOR) or B&W (black & white)

SYNC SOURCE: The sync source is INT (internal) or EXT (external).

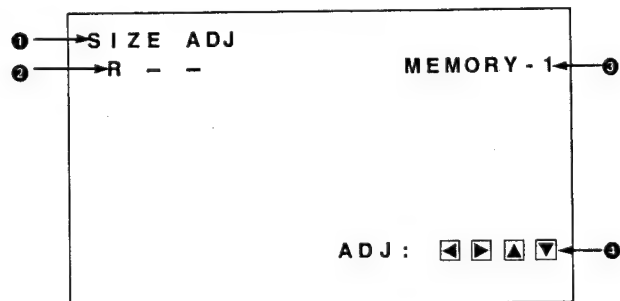
Notes

- "INPUT SIGNAL", "COLOR SELECT", and "SYNC SOURCE" are not displayed when the input signal is from VIDEO IN.
- "SYNC SOURCE" is displayed only when both internal and external sync signal are input.

To change the setting, adjust by pressing **◀**, **▶**, **▲** and **▼** keys.

On-Screen Displays during Adjustments

During the registration adjustment, the following displays will appear.



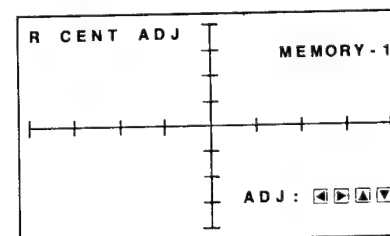
- 1 The adjustment mode
- 2 The color to be adjusted
 RGB: Green signal is being adjusted.
 Note: Red and blue signals are also being adjusted.
 -G-: Green signal is being adjusted.
 R--: Red signal is being adjusted
 --B: Blue signal is being adjusted
- 3 The MEMORY number selected in the PAGE 3.
 For details.
- 4 The operable adjustment key

CENT (centering) Adjustment

Adjust so that each colored line converges in the middle of the screen.

Operation

- 1 Press CENT R key to enter red centering adjustment mode.
 To enter blue centering adjustment mode, press CENT B key.



- 2 Press CUT OFF B key to cut off blue signal.
 In blue centering adjustment mode, press CUT OFF G key to cut off green signal.

- 3 Adjust moving red until it converge with the green center point with ◀, ▶, ▲ and ▼ keys.
 To adjust blue, move lines until they converge with the red center point.

Note

•When the vertical and the horizontal lines of the cross are not parallel to the frame of the screen or the hatch pattern does not fit to the screen by a large amount, it is possible that the projector and the screen are not installed correctly. (e.g. The floor is not flat.)
 In this case, before adjusting with the Commander, move the projector and the screen to get the best possible condition.

•You can enter the green centering adjustment mode by pressing the CENT R and CENT B keys simultaneously, however, we recommend not adjust green centering. Since doing so may cause improper projection.

1-15. REGISTRATION ADJUSTMENT

Display the test pattern on the screen and adjust the registration.
First perform the green adjustments and then red and then the blue adjustments.

Procedure

Connect the desired input signal and select it on the Commander.

Green

Press ADJ G key to select green signal.
Press CUT OFF R and B keys to cut off red and blue signal.

SIZE ↔ LIN → SKEW ↔ BOW → KEY ↔ PIN → ZONE

Red

Press ADJ R key to select red signal.
Press CUT OFF B key to cut off blue signal.
Make the red lines converge with the green lines.

CENT → SIZE ↔ LIN → SKEW ↔ BOW → KEY ↔ PIN → ZONE

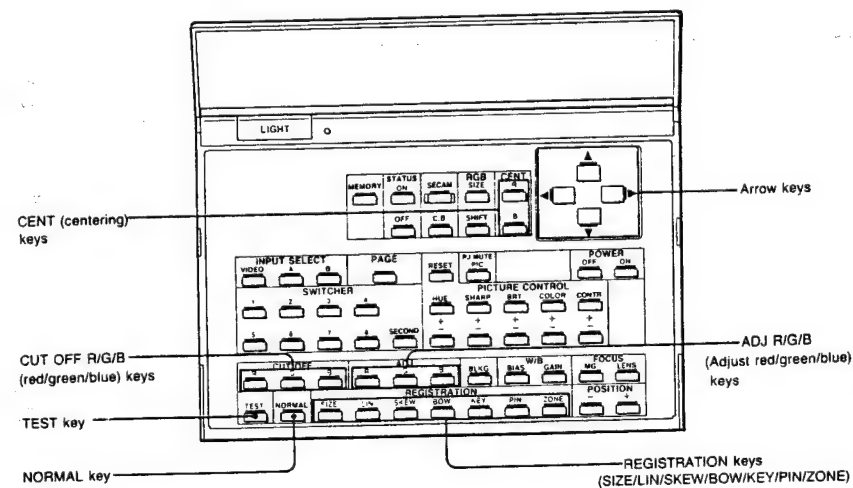
Blue

Press ADJ B key to select blue signal.
Press CUT OFF G to cut off green signal.
Make the blue lines converge with the red lines.
(It is also possible to cut off red signal and make the blue lines converge with the green lines)

CENT → SIZE ↔ LIN → SKEW ↔ BOW → KEY ↔ PIN → ZONE

↔ : Go back and forth between two keys.

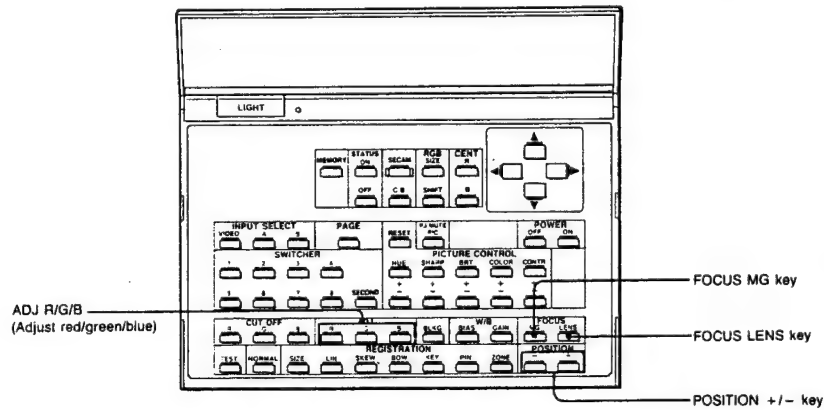
Keys for Registration Adjustments



1-14. FOCUS ADJUSTMENT

There are two steps of focus adjustment, lens focus adjustment and magnetic focus adjustment. First perform lens focus and then, magnetic focus and go back and forth between the two adjustments.

Keys for Focus Adjustment



Note

When the vertical and the horizontal lines of the cross are not parallel to the frame of the screen or the hatch pattern does not fit to the screen by a large amount, it is possible that the projector and the screen are not installed correctly. (e.g. The floor is not flat.) In this case, before adjusting with the Commander, move the projector and the screen to get the best possible condition.

Lens Focus Adjustment

- 1 Press FOCUS LENS key to enter lens focus adjustment mode.





LENS FOCUS ADJ
- G -

ADJ :

- 2 Press ADJ G key to select green signal.
- 3 Adjust the center focus with ◀ and ▶ keys.
- 4 Press ADJ R key to select red signal. Adjust the red lens focus in the same way.
- 5 Press ADJ B key to select blue signal. Adjust the blue lens focus in the same way.

Magnetic Focus Adjustment

- 1 Press FOCUS MG key to enter the magnetic focus adjustment mode.

MG FOCUS ADJ		MEMORY - 1
G - ALL		
A : 120	V : 95	ADJ :  
H : 100		NEXT :  





A: The adjusted data of the center focus
V: The adjusted data of the upper and the bottom focus
H: The adjusted data of the right and left focus

- 2 Press ADJ G key to select green signal.

- 3 Adjust the center focus with ◀ and ▶ keys.
The display on the upper left: G-ALL

- 4 Press POSITION + key.
Adjust the upper and lower focus with ◀ and ▶ keys.
During this adjustment the center focus will not be changed.
The display on the upper left: G-V

- 5 Press POSITION + key.
Adjust the left and right focus with ◀ and ▶ keys.
During this adjustment the center focus will not be changed.
The display on the upper left: G-H

MG FOCUS ADJ		MEMORY - 1
R - ALL		
A : 120	V : 95	ADJ :  
H : 100		NEXT :  

- 6 Press ADJ R key to select red signal.
Adjust the red magnetic focus in the same way.

- 7 Press ADJ B key to select blue signal.
Adjust the blue magnetic focus in the same way.

- 8 If necessary, perform the lens focus adjustment again and go back to the magnetic focus again.

Note

When the vertical and the horizontal lines of the cross are not parallel to the frame of the screen or the hatch pattern does not fit to the screen by a large amount, it is possible that the projector and the screen are not installed correctly (e.g. The floor is not flat.)
In this case, before adjusting with the Commander, move the projector and the screen to get the best possible condition.

Selecting Data MEMORY Number

- 1 Press PAGE key three times.
The Page 3 display will appear.

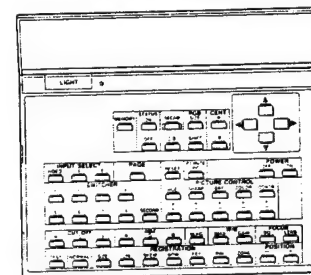
PAGE 3		INPUT-A
MEMORY PRESET		
MEMORY-1	MEMORY-5	
MEMORY-2	MEMORY-6	
MEMORY-3	MEMORY-7	
MEMORY-4	MEMORY-8	
SELECT: <input type="button" value="←"/> <input type="button" value="→"/> <input type="button" value="↑"/> <input type="button" value="↓"/>		
NEXT: [PAGE]		

- 2 Select the desired MEMORY number (MEMORY 1—8) with the four arrow keys.
Your projection aspect ratio is 16:9 Select from MEMORY 1, 2, 3, 4, 5 and 6.
Your projection aspect ratio is 4:3 Select MEMORY 7 or 8.
The adjusted data will be stored in the MEMORY number selected in this step.

- 3 Press PAGE key three times to return to the original screen.

Making the Adjustments Keys Operable

The keys in the colored portion in the illustration are usually inoperable in order to prevent the users from changing the registration adjustments.
So before proceeding the adjustments, you must cancel the protect function.



- 1 Press TEST key for at least 5 seconds.
The display will appear.

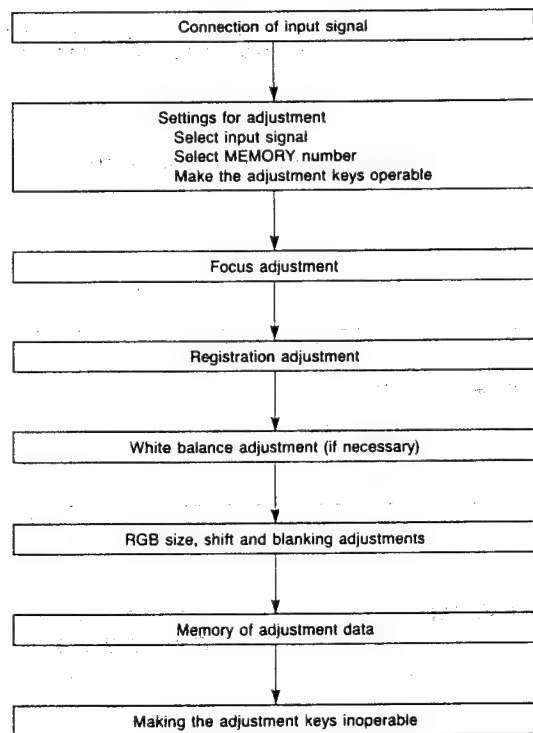
Do you wish to enter into
the SERVICEMAN CONTROL MODE?

YES:
NO:

- 2 Press key.
All the keys are now operable.

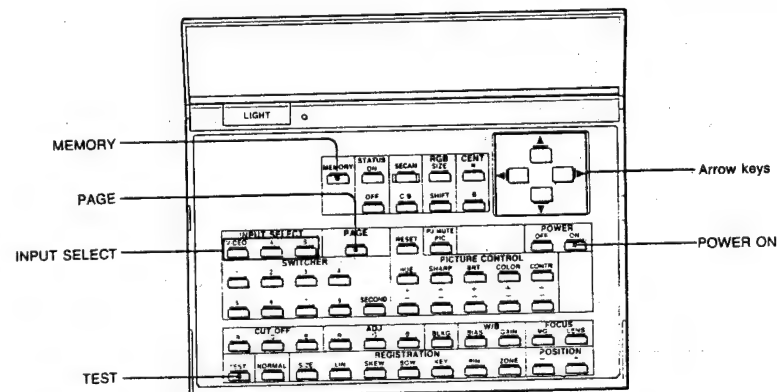
1-12. ADJUSTMENT PROCEDURE

Perform each adjustment with the Remote Commander for each input signal.
Follow the steps.



1-13. SETTINGS FOR ADJUSTMENTS

Keys for Adjustments



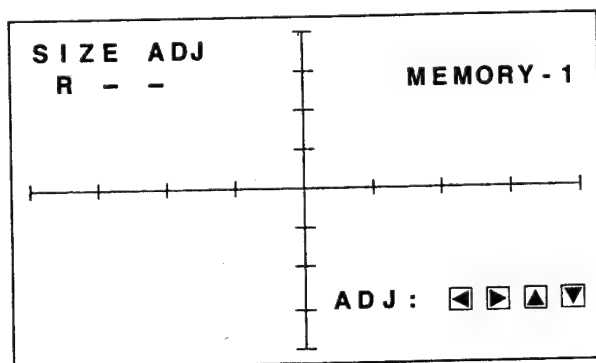
Selecting Input Signal

- 1** Turn on the MAIN POWER switch on the set and press POWER ON key on the Commander.
- 2** Press INPUT A, INPUT B or VIDEO key on the Commander to select the input signal.

SIZE Adjustment

Adjust the size of the displayed picture with respect to the screen.
Pay attention to the upper, low, right and left sides of the screen.

- 1 Press SIZE key to enter size adjustment mode.
If TEST key is pressed, the screen display will become hatch pattern.



- 2 Select the color to be adjusted with ADJ R, G or B keys.

- 3 If you want to cut off a color, use CUT OFF R, G or B key.
To restore the color, press the CUT OFF key again.

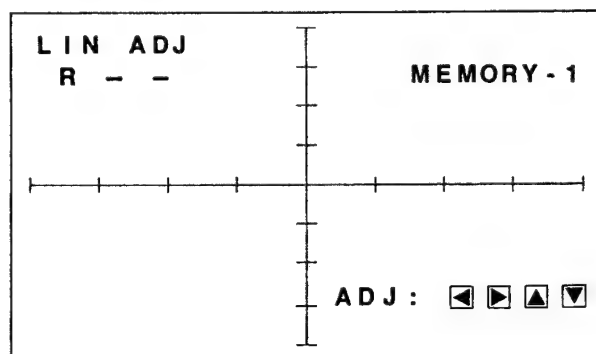
- 4 Adjust with ◀, ▶, ▲ and ▼ keys.

◀	Horizontal size To reduce	
▶	Horizontal size To expand	
▲	Vertical size To expand	
▼	Vertical size To reduce	

LIN (linearity) Adjustment

After preliminary vertical and horizontal size adjustment is completed, adjust the unbalanced size with this linearity adjustment. You may need to go back to the size adjustment again.

- 1 Press LIN key to enter the linearity adjustment mode.
If TEST key is pressed, the screen display will become hatch pattern.



- 2 Select the color to be adjusted with ADJ R, G or B keys.

- 3 If you want to cut off a color, use CUT OFF R, G or B key.
To restore the color, press the CUT OFF key again.

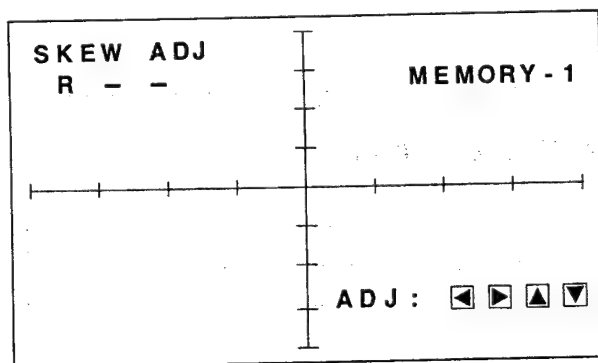
- 4 Adjust with ◀, ▶, ▲ and ▼ keys.

◀	The right and left vertical lines are shifted to the left while the vertical center line of the displayed picture remains unchanged.	
▶	The right and left vertical lines are shifted to the right while the vertical center line of the displayed picture remains unchanged.	
▲	The top and bottom horizontal lines are shifted upward while the horizontal center lines of the displayed picture remains unchanged.	
▼	The top and bottom horizontal lines are shifted downward while the horizontal center lines of the displayed picture remains unchanged.	

SKEW Adjustment

Adjust the horizontal and vertical center lines.

- 1 Press SKEW key to enter the skew adjustment mode.
If TEST key is pressed, the screen display will become hatch pattern.



- 2 Select the color to be adjusted with ADJ R, G or B keys.

- 3 If you want to cut off a color, use CUT OFF R, G or B key.
To restore the color, press the CUT OFF key again.

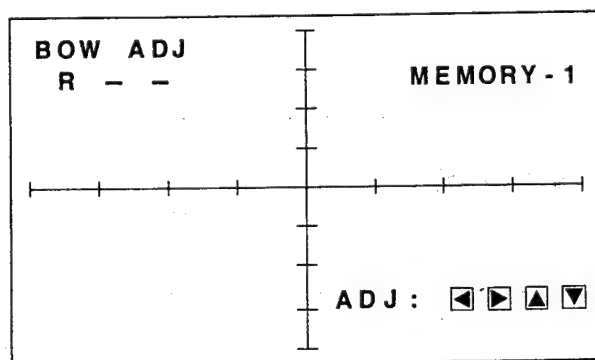
- 4 Adjust with ◀, ▶, ▲ and ▼ keys.

◀	The cross center vertical line leans leftward.	
▶	The cross center vertical line leans rightward.	
▲	The cross center horizontal line leans toward upper right.	
▼	The cross center horizontal line leans toward lower right.	

BOW Adjustment

Adjust the bow-like distortion of the center cross.

- 1 Press BOW key to enter the bow adjustment mode.
If TEST key is pressed, the screen display will become hatch pattern.



- 2 Select the color to be adjusted with ADJ R, G or B keys.

- 3 If you want to cut off a color, use CUT OFF R, G or B key.
To restore the color, press the CUT OFF key again.

- 4 Adjust with ◀, ▶, ▲ and ▼ keys.

◀	The vertical lines are curved leftward.	
▶	The vertical lines are curved rightward.	
▲	The horizontal lines curved upward.	
▼	The horizontal lines curved downward.	

KEY (Keystone) Adjustment

Adjust the trapezoidal distortion in the vertical and horizontal directions.

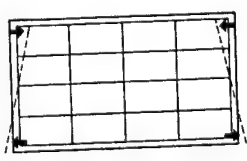
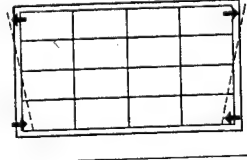
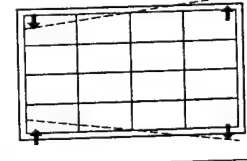
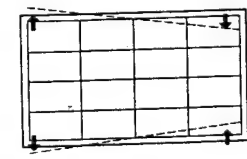
- 1 Press KEY key to enter the keystone adjustment mode.
If TEST key is pressed, the screen display will become fine hatch pattern.

KEY ADJ		MEMORY - 1	
R - -			
		ADJ :	◀ ▶ ▲ ▼

- 2 Select the color to be adjusted with ADJ R, G or B keys.

- 3 If you want to cut off a color, use CUT OFF R, G or B key.
To restore the color, press the CUT OFF key again.

- 4 Adjust with ◀, ▶, ▲ and ▼ keys.

◀	The vertical lines of bottom side expand.	
▶	The vertical lines of top side expand.	
▲	The horizontal lines of right side expand.	
▼	The horizontal lines of left side expand.	

PIN (Pincushion) Adjustment

Adjust the pincushion distortion of all the sides.

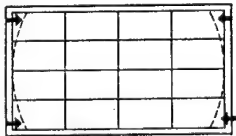
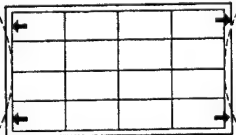


- 1 Press PIN key to enter the PIN adjustment mode.
If TEST key is pressed, the screen display will become fine hatch pattern.

PIN ADJ		MEMORY - 1	
R	- -		
		ADJ : ◀ ▶ ▲ ▼	

- 2 Select the color to be adjusted with ADJ R, G or B keys.

- 3 If you want to cut off a color, use CUT OFF R, G or B key.
To restore the color, press the CUT OFF key again.

- 4 Adjust with ◀, ▶, ▲ and ▼ keys.

◀	The right and left side lines are curved like a barrel.	
▶	The right and left side lines are curved like a bobbin.	
▲	The top and bottom lines are curved like a bobbin.	
▼	The top and bottom lines are curved like a barrel.	

1-16. WHITE BALANCE ADJUSTMENT

ZONE Adjustment:

Adjust the lines in each zone.

- 1 Press ZONE key to enter zone adjustment mode.**
The hatch pattern and the cursor will appear.

ZONE	ADJ				MEMORY - I
H	-	.			
ADJ :			◀	▶	▲ ▼
NEXT :			+	=	

- 2** Select the color to be adjusted with ADJ R, G or B keys.

- 3** If you want to cut off a color, use CUT OFF R, G or B key. To restore the color, press the CUT OFF key again.

- 4** Press **POSITION** keys to select the zone to be adjusted.

- +**: The cursor moves sequentially forward
- : The cursor moves sequentially in reverse.

6	12		18	8
10	16	2	20	14
	4	1	5	
11	19	3	21	7
7	13		15	9

- 5** Adjust the distortion in the cursor position with ◀, ▶, ▲ and ▼ keys.

After adjusting green signal, perform red and blue adjustment. This adjustment is the last of the registration adjustments.

Before Adjustment

You can store one of four different color temperature data into the HDTV1, HDTV2, VID1 and VID2 positions.

The data is preset at factory as follows.

HDTV1: Aspect ratio 16:9 color temperature 6500K

HDTV2: Aspect ratio 16:9 color temperature 9300K

VID1: Aspect ratio 4:3 color temperature 6500K

VID1: Aspect ratio 4:3 color temperature 6500K
VID2: Aspect ratio 4:3 color temperature 9300K

VID2: Aspect ratio 4:3 color temperature 5500K. Normally adjusting the white balance is unnecessary.

However, if you wish to set the color temperature at your own level, you will need to adjust the white balance. To perform the white balance adjustment, first display PAGE 4 by pressing PAGE key, and select the desired position by pressing the arrow keys.

Then follow the steps to perform the adjustment.

After the adjustment is done, store the data.

PAGE 4 INPUT-A
SYSTEM PRESET
COLOR TEMPERATURE
HDTV1 HDTV2 VID1 VID2
INPUT SIGNAL: GBR YPBPR
COLOR SELECT: COL B&W
SYNC SOURCE: INT EXT

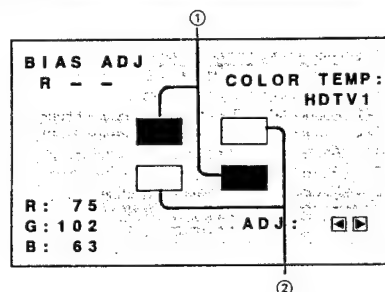
SELECT: ☐ ☐ ☐ ☐
NEXT: [PAGE]

To adjust white balance, both BIAS adjustment and GAIN adjustment must be performed repeatedly.

Normally adjustments is performed with the test patterns, but if desired, you can show an input signal display by pressing TEST key for about 3 seconds.

BIAS Adjustment

- 1 Press W/B BIAS key to enter the BIAS adjustment mode.
The plug pattern will appear.

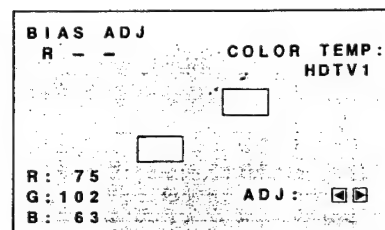


- 2 Press ADJ R, G and B key to select color to be adjusted.

- 3 Adjust with ◀ or ▶ keys.

- ◀ Less brightness
- ▶ More brightness

Make part 1 as dark as possible, so that the black of the background and part 1 look the same.
Part 2 should be slightly brighter than the background.

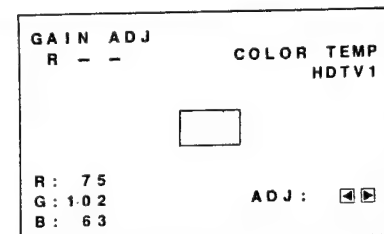


Note

When the on-screen display disturbs the adjustment setting, press STATUS OFF key and erase the display.
After the adjustments is completed, press STATUS ON key to have the display appear on the screen again.

GAIN adjustment

- 1 Press W/B GAIN key to enter the GAIN adjustment mode.
The window pattern will appear.



Adjusted data for each color

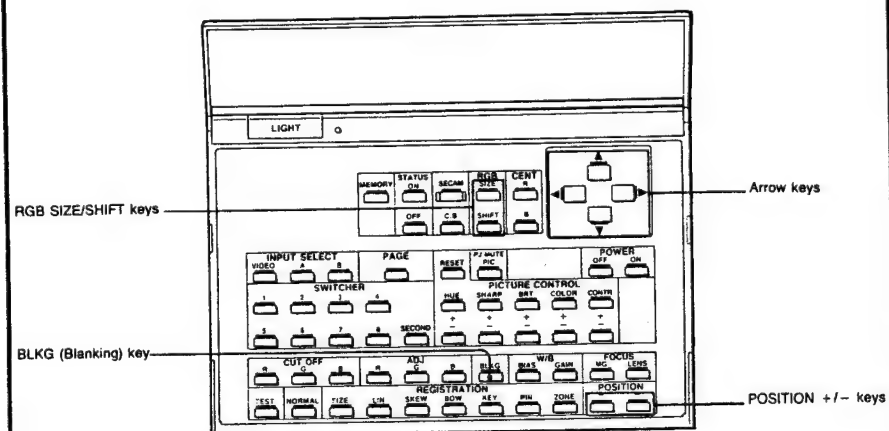
- 2 Press ADJ R, G and B key to select color to be adjusted.

- 3 Adjust with ◀ or ▶ keys until the □ portion becomes white.

- ◀ Less bright
- ▶ Brighter

1-17. OTHER ADJUSTMENT

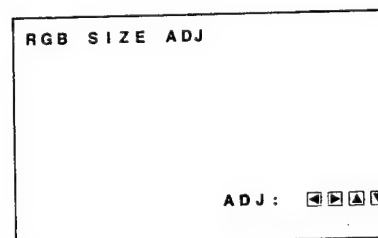
Keys for Other Adjustments



RGB SIZE adjustment

If size of the picture input from INPUT A or B does not fit the screen, adjust RGB SIZE.

- 1 Press RGB SIZE key to enter RGB SIZE adjustment mode.



- 2 Adjust with arrow keys so that the picture fits the screen.

- ◀ to reduce horizontal size
- ▶ to expand horizontal size
- ▲ to expand vertical size
- ▼ to reduce vertical size

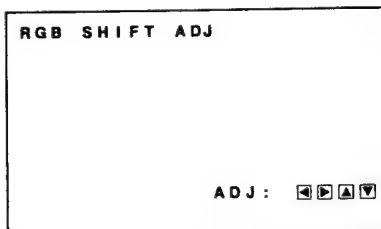
Notes

- This adjustment does not function with input signal from VIDEO IN connectors.
- TEST key does not function in this adjustment mode.

RGB SHIFT adjustment

If the picture input from INPUT A or B needs to be shifted to fit the screen, adjust RGB SHIFT.

- 1 Press RGB SHIFT key to enter the RGB SHIFT adjustment mode.



- 2 Adjust with arrow keys so that the picture fits the screen. The picture shifts according to the direction of the arrow.

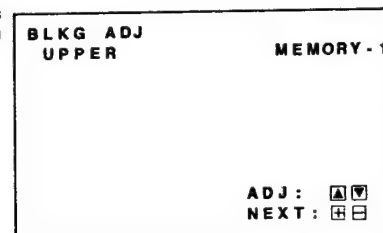
Notes

- This adjustment does not function with input signal from VIDEO IN connectors.
- TEST key does not function in this adjustment mode.

BLKG (Blanking) Adjustment

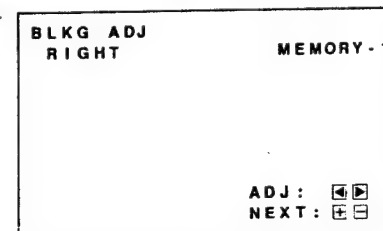
If you wish to cut the portion of picture that is bigger than the screen, perform this adjustment.

- 1 Press BLKG key to enter the blanking adjustment mode. Input signal picture will appear. If TEST key is pressed, the screen display will become hatch pattern.



- 2 Press POSITION +/- key to select the position to be cut off. The position to be cut off will change as follows.

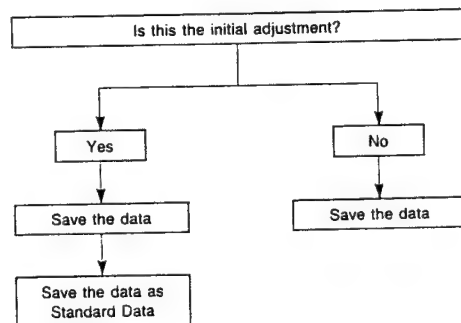
+: UPPER→LOWER→LEFT→RIGHT
-: In reverse order



- 3 To adjust UPPER and LOWER: Adjust with ▲ or ▼ key.
To adjust LEFT and RIGHT: Adjust with ◀ or ▶ key.

1-18. MEMORY OF ADJUSTMENTS DATA

After adjustments you need to save the adjustment data. After the initial adjustment, you must perform 2 steps to save the data.



How to save the data

After adjustments, press MEMORY key.
(Please do not keep pressing.)
The adjustment data of the input signal will be saved. During saving other keys cannot be operable.

MEMORY DATA
in saving!

No key may be applicable
during the indication of
this mode.

MEMORY DATA
saving is
complete!

How to save the data as Standard Data

If the adjusted data in a selected MEMORY number on PAGE 4 display is saved as Standard Data, the adjusted data for all MEMORY numbers will be calculated and changed to reflect the new registration information.

The difference between the factory preset data and the initial adjustment data will be put into all MEMORY numbers.

1 After saving the data, keep pressing MEMORY key for more than 3 seconds to enter the Standard Data saving mode.

The registration data
will be used as standard
for MEMORY-1 - MEMORY-8
OK?

YES :
NO :

2 Press key.
e.g. You have performed adjustments in MEMORY 1 and saved the data as Standard Data.

■ Before adjustment

	MEMORY 1 --- MEMORY 6	MEMORY 7	MEMORY 8
Adjustment data	A	B	B
Factory preset data	A	B	B

• Factory preset: MEMORY 1—6 are the same data. Aspect ratio: 16:9
MEMORY 7, 8 are the same data. Aspect ratio: 4:3

• Before adjustment "Adjustment data" is the same as "Factory preset data".

■ After adjustment in MEMORY 1

	MEMORY 1 --- MEMORY 6	MEMORY 7	MEMORY 8
Adjustment data	A'	B	B
Factory preset data	A	B	B

■ After saving as Standard data

The difference between A' and A is calculated and put into all MEMORY numbers.
The data of MEMORY 1—6 are the same and the data of MEMORY 7 and 8 are the same.

	MEMORY 1 --- MEMORY 6	MEMORY 7	MEMORY 8
Adjustment data	A'	B'	B'
Factory preset data	A	B	B

Note
Never save Standard Data when you want to keep the previous adjustment data in each MEMORY number.

1-19. MAKING THE ADJUSTMENT KEYS INOPERABLE

When you turn off the set, the adjustments keys become inoperable in order to prevent the users from changing the registration adjustments.
It is also possible to make the keys inoperable while the power is on in the following way.

- 1 Press NORMAL key for at least 3 seconds.
The display will appear.

Do you wish to return to
the USER CONTROL MODE?

YES:
NO :

- 2 Press ▲ key.
The adjustment keys are now inoperable.

1-20. DATA RESET

When you want to make the adjustment data reset to the previous data or factory preset data,
perform the following steps.

Previous Data Reset

When you have not saved the data, the adjusting data will be reset to the previously saved data.

- 1 Enter the adjustment mode of the data to be reset.
e.x. If you want to reset red size adjustment, press SIZE and ADJ R keys.

- 2 Press ◀ and ▶ keys simultaneously.

SIZE ADJ
R - -

REGISTRATION RED
DATA RESET MODE
Do you wish to return to
previously saved data?

YES:
NO :

- 3 Press ▲ key.
Data reset will be executed. If you want to cancel data reset, press ▼ key.
If you press neither of the keys, data reset mode will be cancelled after 15 seconds.

Factory Data Reset

When you have already saved the data, the adjusted data will be reset to the factory preset data.

1 Enter the adjustment mode of the data to be reset.

e.x. If you want to reset red zone adjustment, press ZONE and ADJ R keys.

2 Press ◀ and ▶ keys simultaneously.

ZONE ADJ
R - -

ZONE
DATA RESET MODE
Do you wish to return to
factory preset data?

YES: ▲
NO: ▼

3 Press ▲ key.
Data reset will be executed. If you want to cancel data reset, press ▼ key.
If you press neither of the keys, data reset mode will be cancelled after 15 seconds.

Mode and Data Reset Correspondence

Adjustment mode	Data to be reset	Previous data reset	Factory preset data reset
RGB SIZE	All the data for RGB size	No	Yes
RGB SHIFT	All the data for RGB shift	No	Yes
R CENT	No data reset mode.		
B CENT	No data reset mode.		
G CENT	All the centering data for all colors	No	Yes
SIZE, LIN, SKEW, BOW, KEY, PIN	All the registration data for the selected color (including the Zone data)	Yes	Yes
ZONE	All the Zone data for the selected color	Yes	Yes
W/B BIAS	All the W/B bias and gain data for all colors	Yes	Yes
W/B GAIN	All the W/B bias and gain data for all colors	Yes	Yes
MG FOCUS	All the magnetic focus data for the selected color	Yes	Yes
LENS FOCUS	No data reset mode.		

Yes: Possible
No: Impossible

1-21. FOR REFERENCE— THE MEMORY ARCHITECTURE

The memory structure is divided into four parts; two CHANNEL MEMORY, REGISTRATION MEMORY and W/B (white balance) MEMORY.

MEMORY name	MEMORY data	How the projector recognizes data	When data is memorized
CHANNEL MEMORY 1	Picture control PIC COLOR BRT SHARP HUE	Input connector INPUT A INPUT B VIDEO	<ul style="list-style-type: none"> •When input channel is switched •When the power is turned off with the Commander
CHANNEL MEMORY 2	RGB SIZE RGB SHIFT PAGE 3 MEMORY number (MEMORY 1—8) PAGE 4 •Color temperature select number (HDTV1, HDTV2, VID1, VID2) •Input signal selection (G8R/YPsPr) •COLOR selection (COL/B&W) •Sync source selection (INT/EXT) SECAM ON/OFF C.B. ON/OFF	Input connector INPUT A INPUT B VIDEO	<ul style="list-style-type: none"> •When MEMORY key is pressed •When the power is turned off with the Commander
REGISTRATION MEMORY	CENT Registration (SIZE, LIN, SKEW, BOW, KEY, PIN, ZONE) MG FOCUS BLKG	MEMORY number selected in PAGE 3 (MEMORY 1—8)	<ul style="list-style-type: none"> •When input channel is switched •When MEMORY key is pressed •When MEMORY number is switched in PAGE 3 •When the power is turned off with the Commander
WHITE BALANCE MEMORY	White balance BIAS/GAIN	Color temperature select number selected in PAGE 4 (HDTV1, HDTV2, VID1, VID2)	<ul style="list-style-type: none"> •When input channel is switched •When MEMORY key is pressed •When color temperature select number is switched in PAGE 4 •When the power is turned off with the Commander

Notes

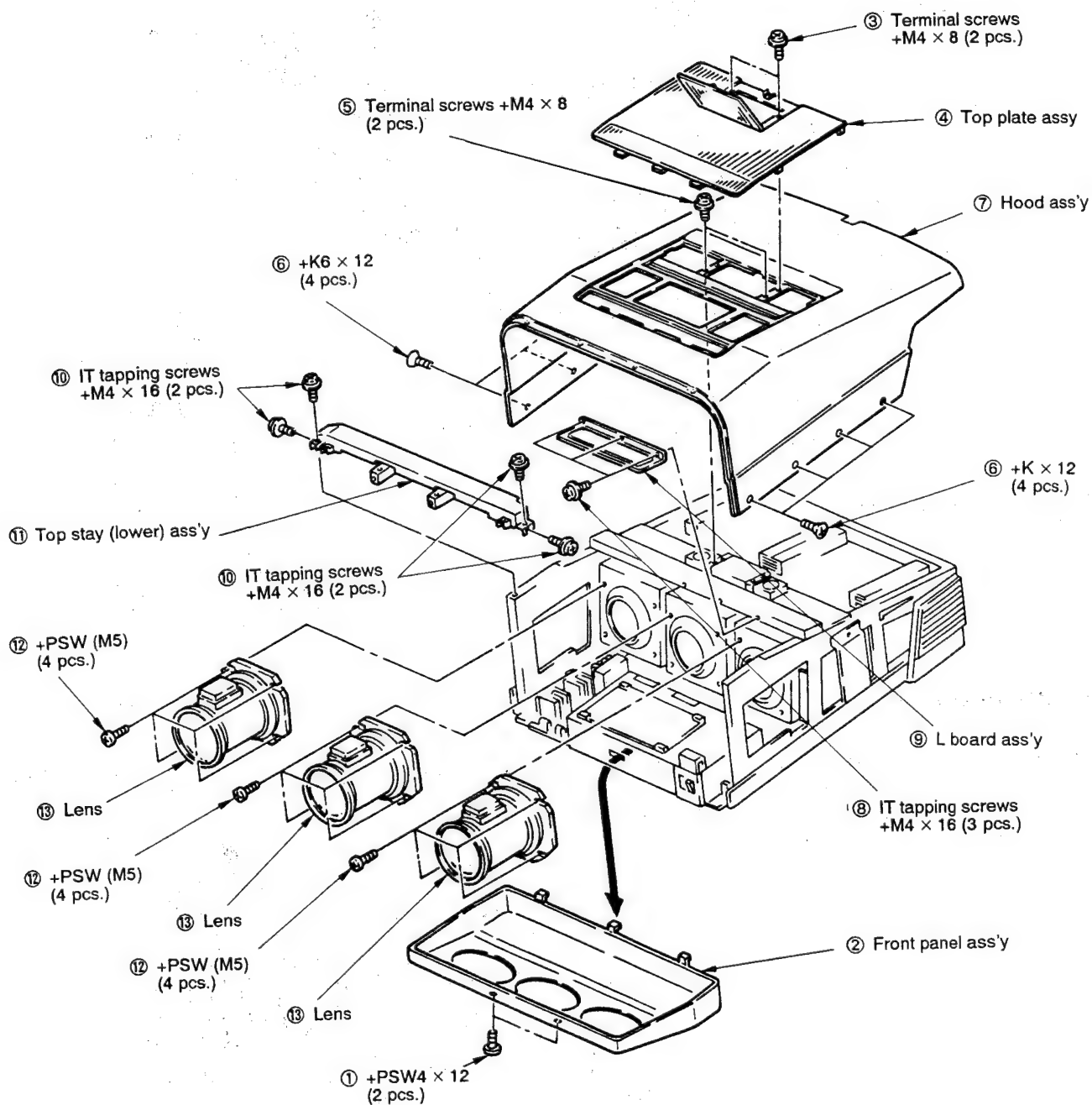
- The data of CHANNEL MEMORY 2 cannot be saved when the input channel is switched, never fail to press MEMORY key after adjustment or setting.
- When the power is turned off on the Commander, all the data is saved and when the power is turned on again, the data will be recovered.

- Turn off the main power on the set after turning off the power on the Commander, unless the data will not be saved.

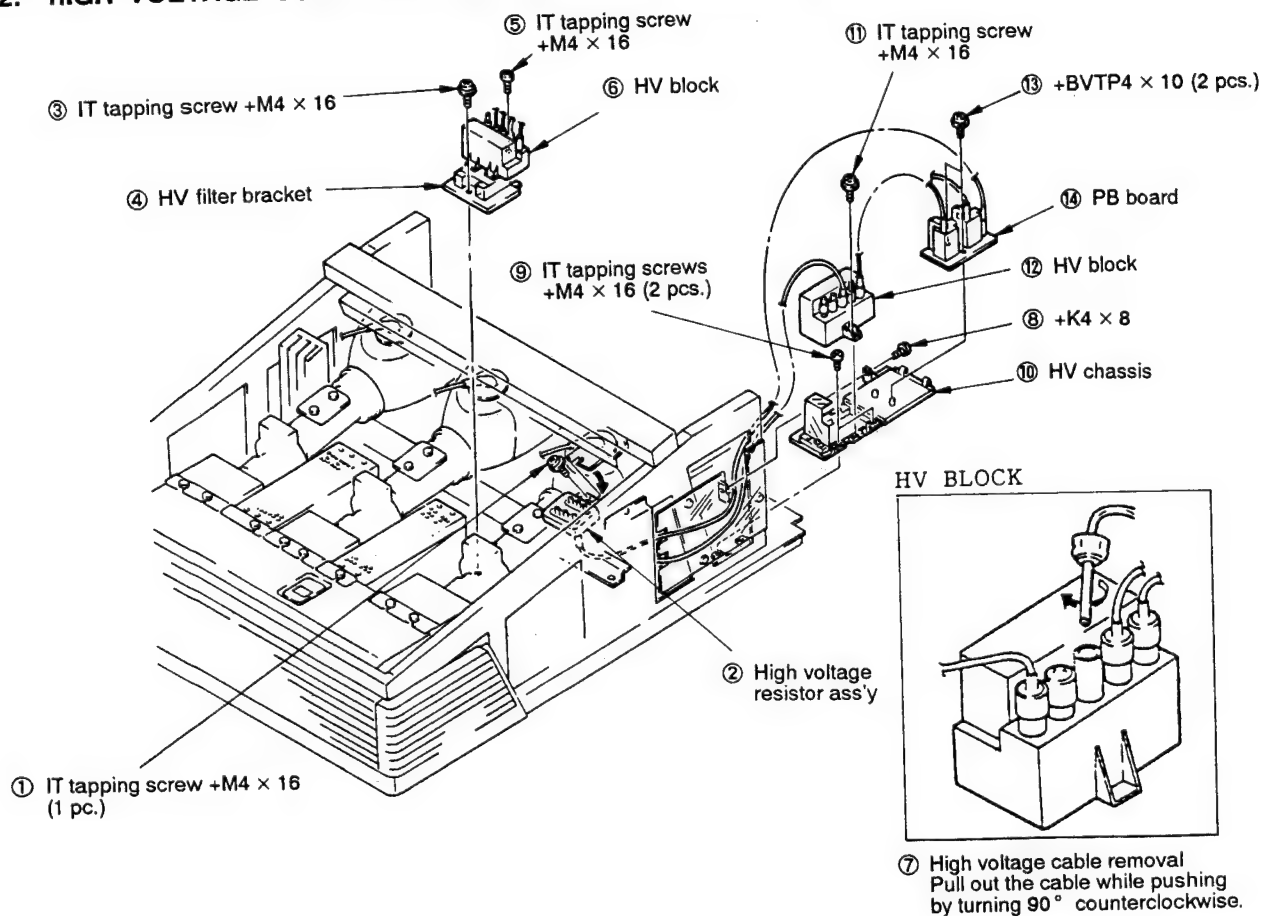
MEMO

SECTION 2 DISASSEMBLY

2-1. LENS REMOVAL

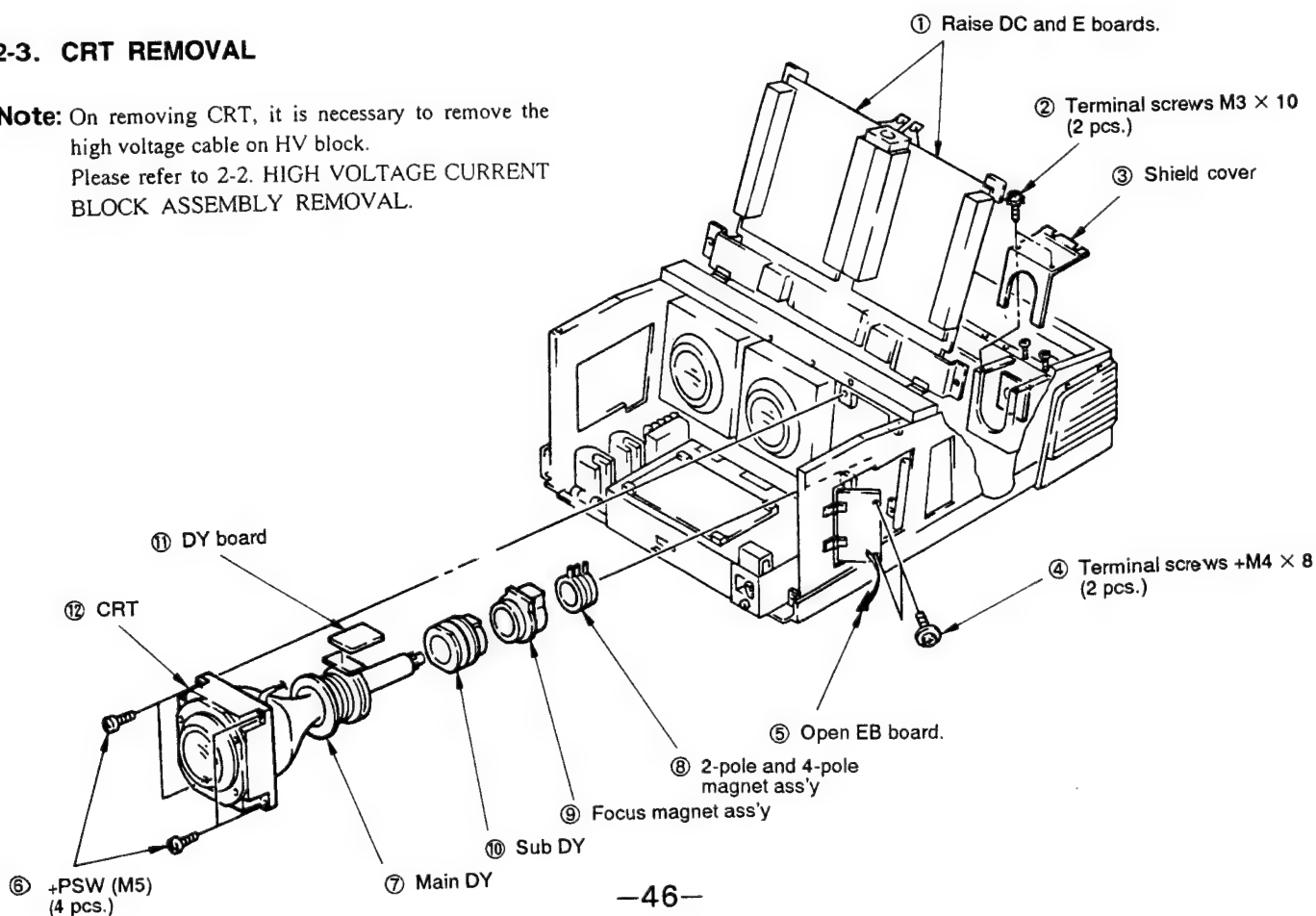


2-2. HIGH VOLTAGE CURRENT BLOCK ASSEMBLY REMOVAL

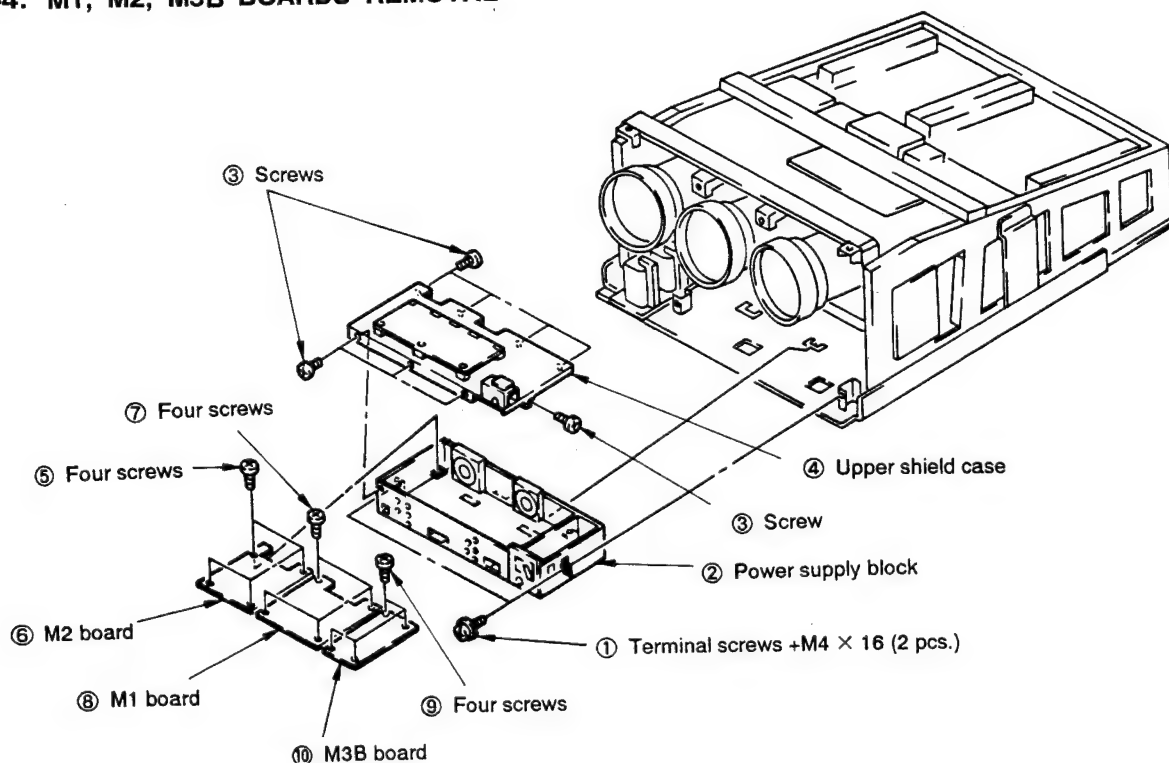


2-3. CRT REMOVAL

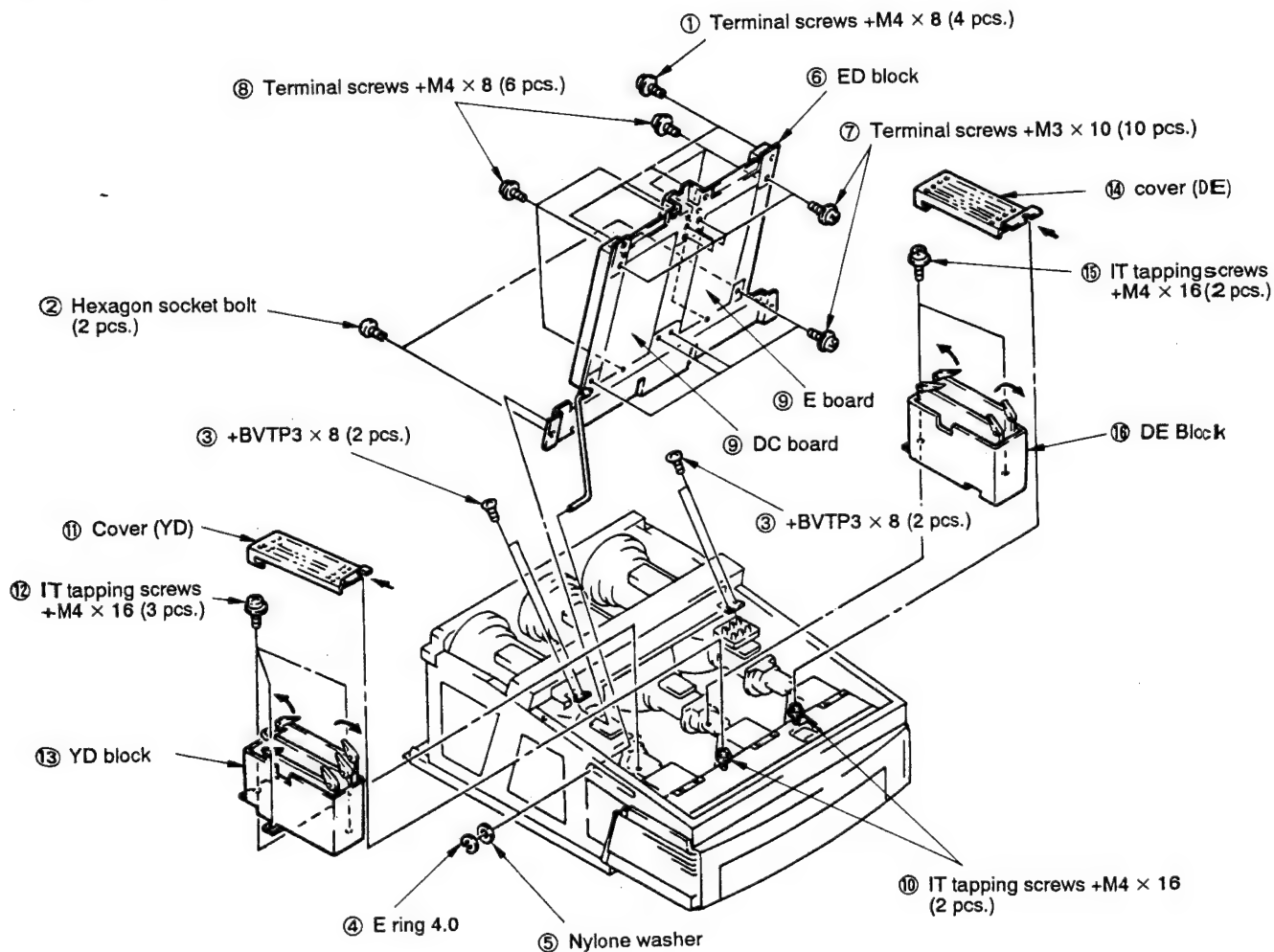
Note: On removing CRT, it is necessary to remove the high voltage cable on HV block.
Please refer to 2-2. HIGH VOLTAGE CURRENT BLOCK ASSEMBLY REMOVAL.



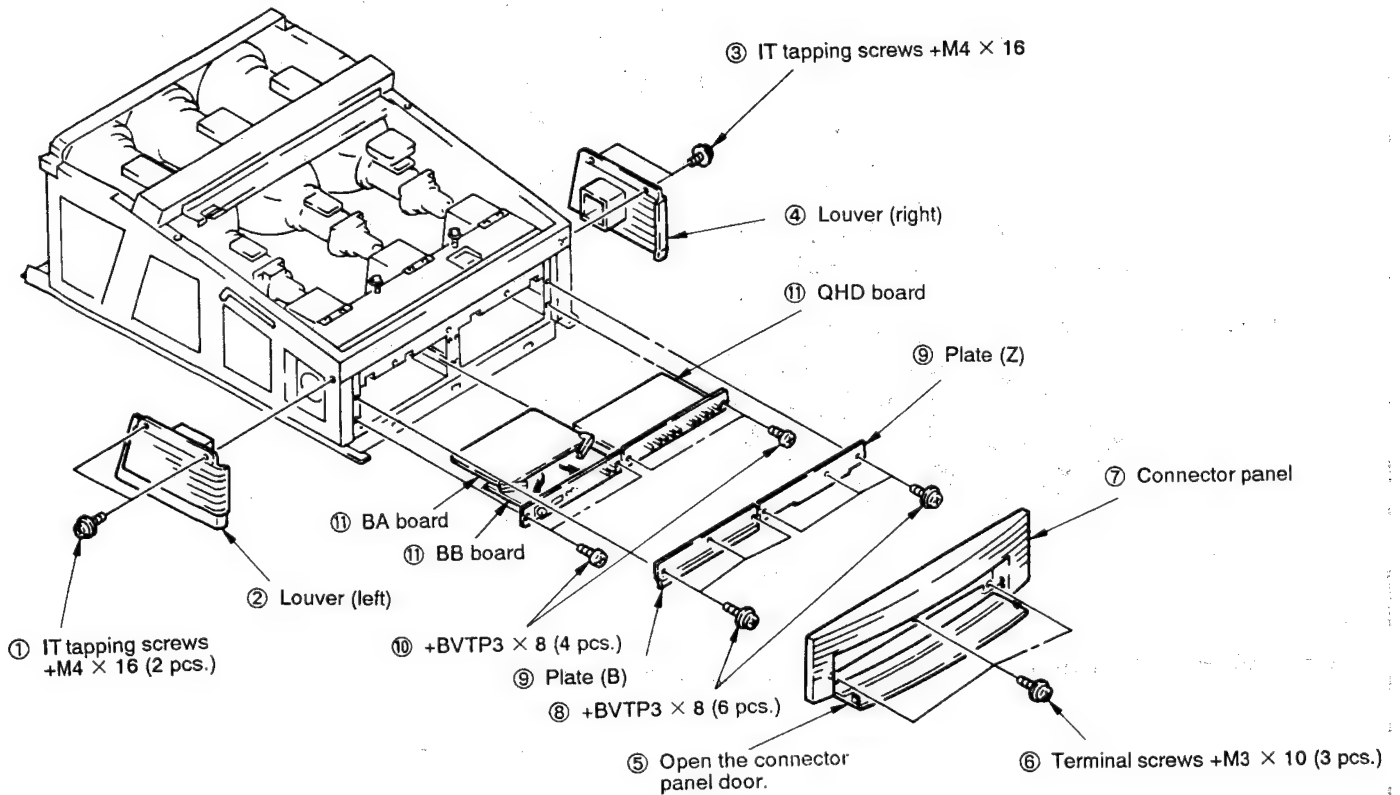
2-4. M1, M2, M3B BOARDS REMOVAL



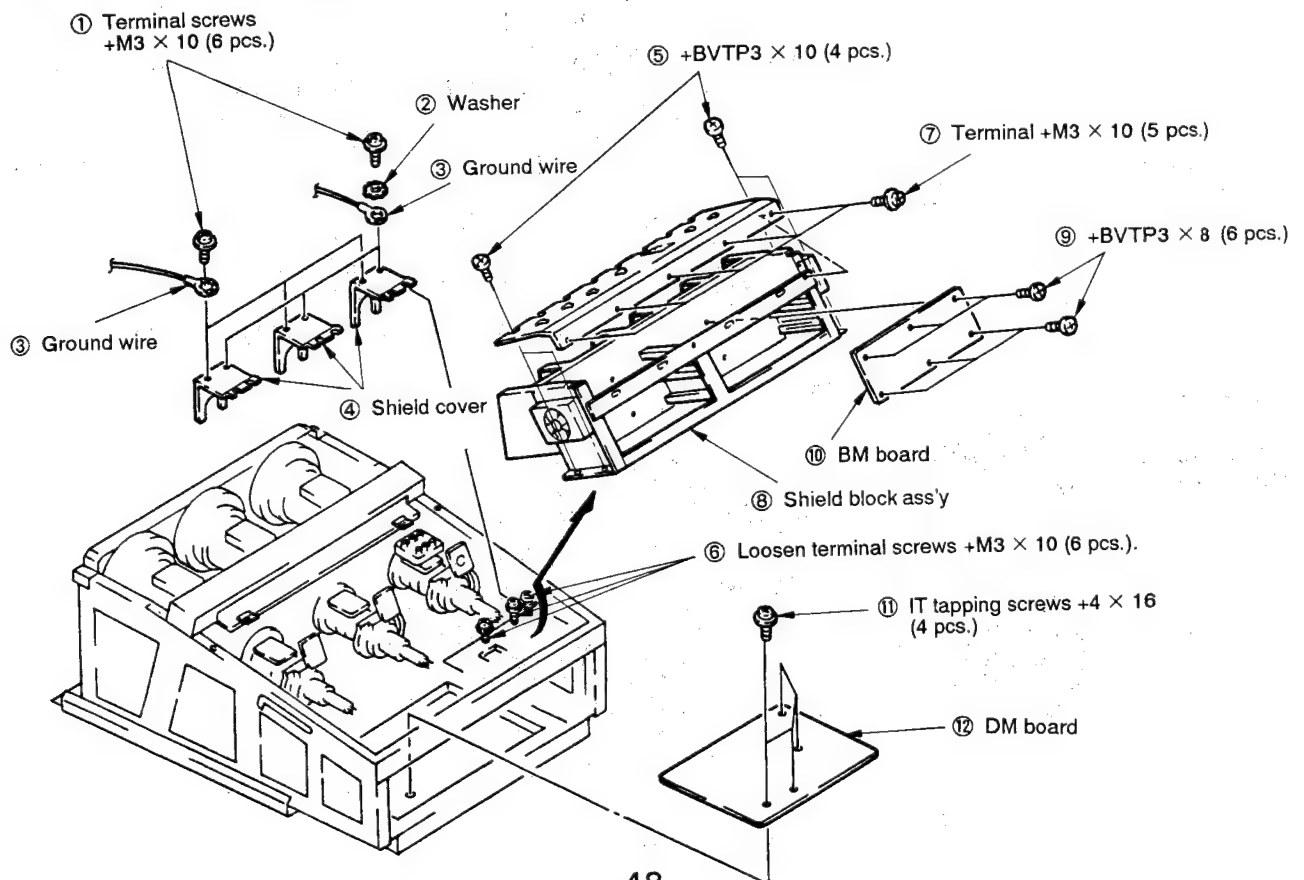
2-5. ED BLOCK ASSEMBLY, YD BLOCK, DE BLOCK REMOVAL



2-6. BA, BB, QHD BOARDS REMOVAL



2-7. BM, DM BOARDS REMOVAL



SECTION 3

CIRCUIT DESCRIPTIONS

3-1. CIRCUIT BOARD BA

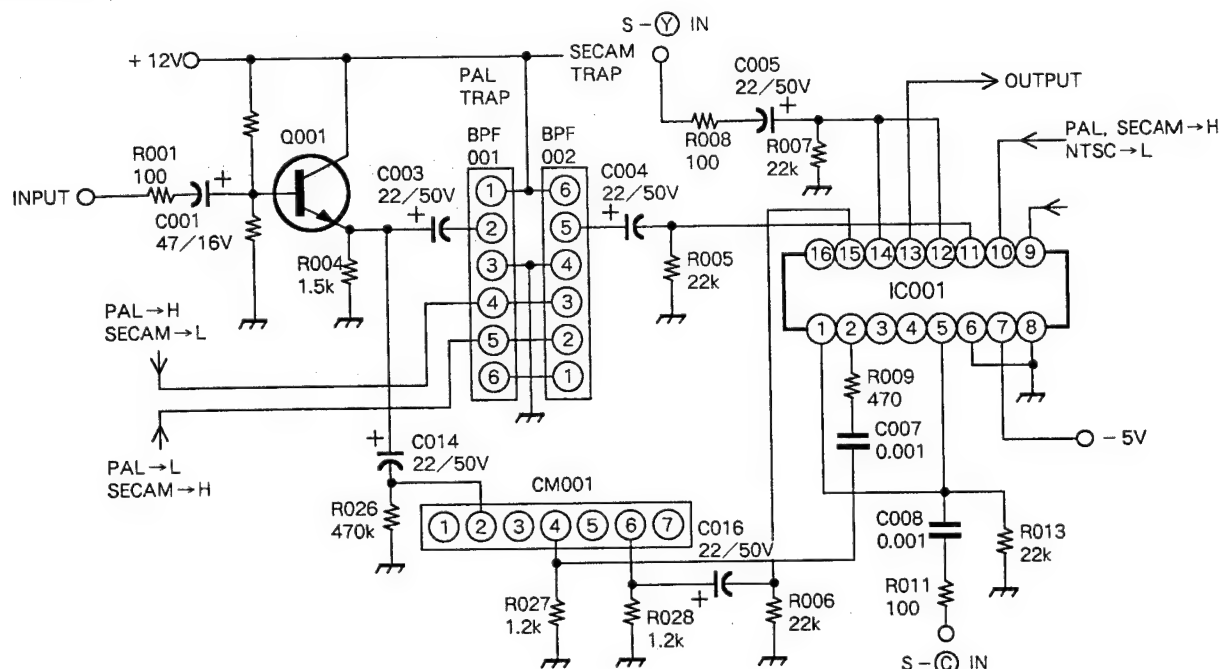
3-1-1. Y SIGNALS

1) The TRAP Circuit

The TRAP circuit receives video signals after the signals are fed through Q001. The TRAP circuit is used to extract the chrominance portion of the video signal. However, since this device is equipped to receive 3 types of chrominance frequencies (SUB CARRIERS), namely PAL, SECAM, NTSC 3.58 and NTSC 4.43, it is necessary to switch the TRAP circuit for each type of signal (except for PAL and NTSC 4.43 whose SUB CARRIERS are identical).

• B/W Signals

B/W signals are input into pin ② of BPF001, and are output from pin ⑤ of BPF002. This is a thru output obtained when the control terminals of BPF001 (pins ④ and ⑤) are Low and both traps are disabled. Subsequently, it is input into pin ⑪ of IC001.



• PAL Mode

Video signals are first input into pin ② of BPF001 where signals in the vicinity of 4.43MHz are extracted. The signals are then sent out through pin ⑥ and are input into pin ① of BPF002. BPF001 and BPF002 are respectively a PAL TRAP and a SECAM TRAP, while pin ④ of BPF001 provides PAL CONT and pin ⑤, SECAM CONT. In all cases, the TRAP is activated when the respective pin signals are High. When operating under the PAL mode, pin ④ will become High and pin ⑤ Low; the signals pass through BPF002 and appear on pin ⑤ after which they are input into pin ⑪ of IC001. This chip is a switching IC used to switch between PAL, NTSC 4.43, NTSC 3.58 and YC signals. Recall that NTSC 4.43 and PAL employ the same method.

• SECAM Mode

The steps followed are identical to PAL up to the point where the signals are input into pin ① of BPF002. With the SECAM mode, however, pins ④ and ⑤ of BPF001 will both turn High. After signals in the vicinity of 4.43MHz and 4.25 MHz are extracted, the signals are then output from pin ⑤ of BPF002 and input into pin ⑪ of IC001.

• NTSC 3.58 Mode

Y signals are input into pin ② of CM001 (Comb Filter) while pin ⑥ and pin ④ output Y signals and chrominance signals respectively. Y signals are input into pin ⑤ of IC001 and chrominance signals into pin ② of this IC.

2) YC Signals

YC signals are fed to board BB in the form of S-VIDEO. Y signals are input into pins ⑫ and ⑭ of IC001 while C signals are input into pins ① and ⑤.

3) IC001 (HD24052BP)

This IC switches between PAL, SECAM, and, NTSC 4.43 /NTSC 3.58/YC modes. Outputs appears on pin ⑬ for Y signals and pin ③ for chrominance signals. The signal status of the controller terminals, pins ⑨ and ⑩, are shown in the following diagram.

	⑨	⑩
PAL • SECAM • NT4.43 • B/W	H	H
NT3.58	H	L
YC	L	—

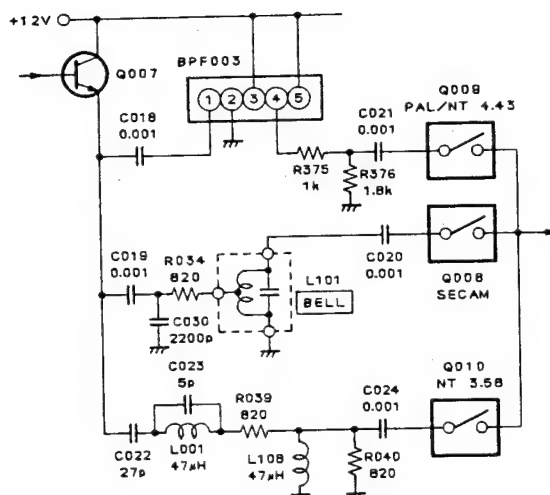
4) SHARPNESS IC

Y signals output from pin ⑬ of IC001 pass through the Delay Line; AMP Q003, Q004, and Q005; and finally the CLAMP circuit (Q212, 213). The signals are then input into pin ⑬ of IC005. The signals also serve as input signals for board BC (IDTV board); these are output from BA-1 31a.

The 2Y signals received from the BC board are switched by IC005 and output from pin ⑭. They are then input into pin ② of IC010 (SHARPNESS IC). The control terminals pins ⑨, ⑩ and ⑪ are High for VIDEO mode and Low for IDTV mode. For IC001, signals was peaked at about 3.6MHz for VIDEO mode and at approximately 6.6MHz for IDTV modes and are output from pin ⑩. Pin ⑧ is the sharpness control terminal; control voltage is -2.5V to 2.5V. Signals output from pin ⑩ are input into pin ⑦ of R. G. B. MATRIX IC003 (CXA1216P).

3-1-2. CHROMINANCE SIGNALS

PAL, SECAM, and NTSC 4.43 signals pass through Q001 and after DC cut at C009, are input into pin ④ of IC001. NTSC 3.58 signals go through COMB FILTER CM001 while chrominance signals are input into pin ② of IC001. After being output from pin ③ of IC001, each signal is passed through a band-pass filter. This circuit is shown below. (circuit diagram)



Chrominance signals are input into pin ⑮ of the decoder IC002 (TDA4555 – V8) after they are passed through the respective BPF. PAL and SECAM signals are output from pin ⑫ and fed through the DELAY LINE. The signals are then 1H delayed and input into pin ⑩. After the phase and level are adjusted by L103 and RV101, decoding takes place by adding the signals input from pin ⑮. Subsequently, the R – Y signals are output from pin ①, and the B – Y signals from pin ③. In the case of NTSC signals, the signals are decoded without passing through the DELAY LINE; the R – Y signals are output from pin ① while the B – Y signals are output from pin ③. ↗

The color - difference signal output from IC002 goes through the CLAMP circuit and enters IC005, an IC used for switching between IDTV. The operation of IC005 is identical to that of the Y signal. Output signals from IC005 are input into an R. G. B. MATRIX IC003 (CXA1216P).

- a) A phase discriminator. This circuit compares the burst signals for PAL and NTSC modes against its internal reference signals.
- b) Frequency discriminating circuit which is used to derive the $H/2$ signal in SECAM transmissions. It consists of an internal frequency discriminator and an external phase shift detector circuit, connected to pin ② (SECAM ID reference circuit),
- c) A logic circuit that provides $H/2$ signal detection for PAL and SECAM modes, in addition to its original ID function.



- **HUE/COLOR CONTROL**

A HUE/COLOR CONTROL voltage ranging from -2.5V to 2.5V is sent to operational amplifier IC012 where the control voltage of IC003 (CXA1216P) is converted to between 2V to 7V.

Because of inconsistencies in IC and resistors, adjustments are made using 3 volumes controls, namely SUB HUE (RV102/VOL for NTSC), HUE ADJ (RV204) and SUB COL (RV205).

- **SUB BRIGHT/SUB PICTURE**

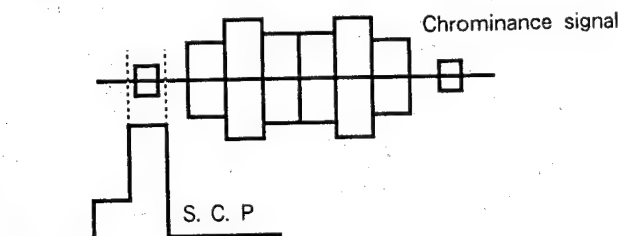
Pin ⑦ of IC003 (CXA1216P) is the CONTROL terminal for PICTURE while pin ⑧ is for BRIGHTNESS. The PICTURE level output is changed by rotating RV203 (SUB PIC); turning RV201 (SUB BRT) changes the blackness level.

3-1-3. IC004 (TDA2595)

Y signals are first passed through the DELAY LINE and then to AMP Q003/004/005 after which they are fed through the SYNC CHIP CLAMP circuit, comprised of Q352/351. Finally, the signal is input into pin ⑪ of IC004 (TDA2595). IC004 outputs the sandcastle pulse to pin ⑥ and C. sync pulse to pin ⑨. The sandcastle pulse is input into pin ⑭ of IC002 (TDA4555 - V8) while it also goes into the CLAMP circuit. C. sync goes into the sync sep circuit, resulting in the output of H. SYNC and V. SYNC pulses. H. SYNC is sent to pin ⑬ of IC006 (TC74HC157AP) via R240 while it is also input into the BC board where it becomes 2H. SYNC and input into pin ⑩ of IC006.

V. SYNC is input into pin ⑩ of IC006 via collector Q207 as well as into the BC board where it is converted to 2V. SYNC. The latter signal is input into pin ⑪ of IC006. Signals converted by IC006 are output as follows: H. SYNC from pin ⑭, V. SYNC from pin ⑨ and connector BA-1 a-3/HD (1) c-3 VD (1). The C. BLK signals from pin ② of IC004 are merged with the C. BLK signals (BA-1 c-23) input from the DA board and fed into pin ① of IC003.

The diagram to the right indicate the phase relationship of pin ⑬ of IC002, the chrominance signal and S. C. P of pin ⑭.



3-1-4. IC009 (CX7916)

CX7916 detects between 50Hz and 60Hz by receiving H. SYNC on pin ① and V. SYNC on ⑤.

INPUT	②	③
50Hz (PAL, SECAM)	L	H
60Hz (NTSC 3.58 4.43)	H	L

The operation of the peripheral circuitry of IC009 are as follows :

1) NTSC 3.58

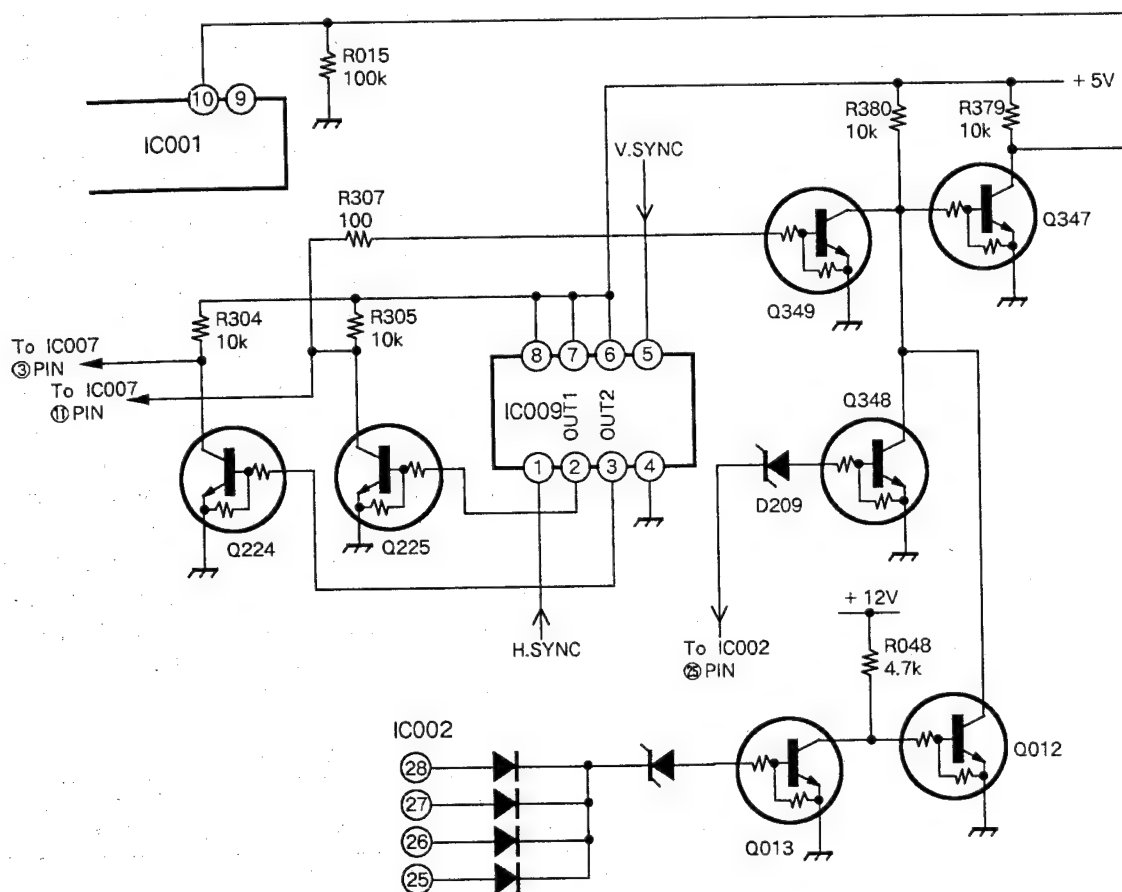
Pin ② of IC009 becomes High and Q225 turns ON, making collector Q225 Low while Q349 is turned OFF and the collector becomes High. Further, Q347 becomes ON and the collector Low, causing pin ⑩ of IC001 to become Low.

3) NTSC 4.43

Pin ② of IC009 turns High, providing the same operation as NTSC 3.58. However, since Q348 becomes ON and the collector Low while pin ②⑤ of IC002 is High, pin ⑩ of IC001 becomes High.

4) B/W

When color signals are being received, pins ②⑤ to ②⑤ of IC002 will be High. In addition, Q013 is turned ON causing the collector to be Low while Q012 is turned OFF causing the collector to be High. These results in the previously described operation. For B/W signals, however, Q013 does not turn ON, and the collector will be High and Q012 turned ON, causing the collector to drop to Low. As a result, Q347 will be OFF and pin ⑩ of IC001 will be High.



2) PAL/SECAM

Pin ② of IC009 becomes Low while Q225 is turned off and the collector becomes High. Q349 turns ON and the collector becomes Low, causing pin ⑩ of IC001 to turn High when collector Q347 becomes High.

3-1-5. IC003 (CXA1216P)

IC003 (CXA1216P) is an R. G. B. MATRIX IC. Pin ⑦ inputs Y signals, pin ⑥ inputs B - Y signals and pin ⑤ R - Y inputs while pin ① receives the BLK pulse (refer to section on IC004) and pin ③ receives the B. P. CLAMP pulse. Pins ⑮, ⑰, and ⑱ outputs B, G and R signals respectively.

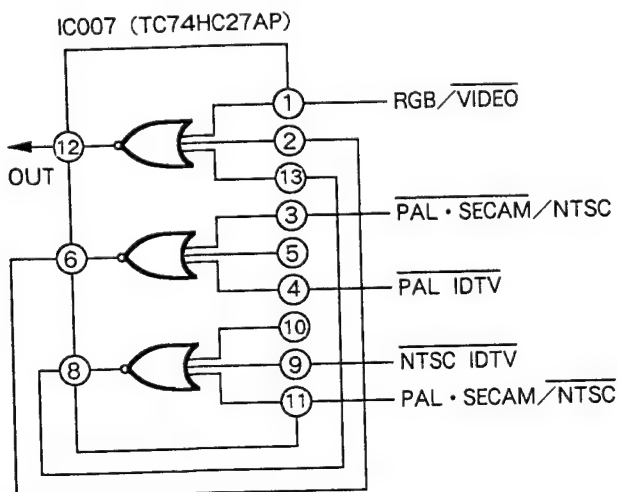
a) DYNAMIC PICTURE SW.

Pin ⑪ of this IC003 is an auto - pedestal which activates the dynamic picture when SW1 is in the open position.

3-1-6. IC007 (TC74HC27AP)

This IC is an IDTV (BC board) SW whose pin ⑫ becomes Low in IDTV MODE, High in VIDEO MODE and Low in RGB MODE.

This line controls pins ⑨, ⑩ and ⑪ on IC007 (control terminal for switching signals Y, R - Y, B - Y for VIDEO and 2Y, 2 (R - Y), 2 (B - Y) on the BC board); pin ① of IC006 (control terminal for H. SYNC signal for VIDEO and 2H, 2V. SYNC signals on the BC board); and finally, pin ④ of IC010 (control terminal for sharpness control).



3-2. CIRCUIT BOARD BB

3-2-1. RGB INPUT (VIDEO SECTION)

The RGB signals received through Input A or B are each input into pin ③ of RL401, 402, 403, after passing through 7A, 9A, 11A of connector BB - 1. On the other hand, the RGB signals received through the switcher and CCQ are input into pins ⑬, ⑪, ⑨ of connector BB - 2. These signals are then input into pin ⑭ of RL401, 402, 403. Pin ① of RL is controlled according to the mode shown in chart 1 and either of the signals output from pin ⑪ goes into C651, C660, C668.

Chart 1

SLOT SEL (BB-1 23B)	RL401, 402, 403 Pin ①	RL Output Pin ⑦
H	H (CCQ)	Pin ⑭
L	L (INPUT A, B)	Pin ⑧

The red signal is clamped by a clamp circuit comprised of Q666, IC410 so that the pedestal level of the signal fed through Q667, 650 is identical to pin ⑤ of IC410. After clamping, the signal passes through Q670, 674, 678; an AMP section comprised by Q682, 683, 684, 685, 686 and is output from 17B of connector BB - 1. The circuit of the blue signal is similar and the signal is output from 19B of connector BB - 1. As far as the green signal is concerned, the signal passes through a clear blue circuit (refer to page 59) after which it follows a similar path and is output from 18C.

3-2-2. VIDEO INPUT (VIDEO SECTION)

Signals from this device's VIDEO IN terminal passes through R539 and the buffer of Q509 and are input into pin ⑫ of IC404. Moreover, as far as the signals received through the S - VIDEO IN terminal is concerned, Y - signals are input into pin ② of IC404 after passing through Q516, while the C - signals are inputs into pin ⑤ after passing through Q517. On the other hand, the VIDEO, Y/C signals entered through INPUT A, B, each goes through the RGB signal line and inputs into pin ⑧ of RL401, 402, 403. VIDEO, Y/C signals received by the switcher are similarly input into pin ⑭ of RL401, 402, 403. As previously mentioned for RGB input the switch of RL, each output goes into ⑬, ①, ③ of IC404 after passing through Q506, Q507, Q508. At this point, pins ⑨, ⑩, and ⑪ of IC404 is under the mode control shown in chart 2. VIDEO signal, Y - signal, C - signal are output from pins ⑭, ⑮, and ④ after which they are sent out through BB - 1 connector 5C/4B/5B to the BA board. The RGB signals decoded by the BA board are input to BB - 1 connector 8C, 9C, 10C where they are respectively fed through Q669, 687, 706 as well as the VIDEO/RGB SW. They are then passed through the emitter follower on Q674, 692, 711 and are output from BB - 1 connector 17B, 18C, 19B, following a similar path as that for RGB inputs.

Chart 2

V. IN SEL (BB-1, 23A)	IC404 ⑨, ⑩, ⑪	IC404 Output ⑭, ⑮, ④
H	L (VIDEO IN)	⑫, ②, ⑤
L	H (Others)	⑬, ①, ③

3-2-3. SYNC SECTION

External SYNC

HD, VD received by INPUT A, B are fed into connector 1A, 2A of BB-1 and are input into pins ⑭ and ⑪ of IC405. On the other hand, signals received by the switcher are input into pins ⑦ and ⑥ of BB-2. For this input and in the case of HD, the peak signal is clamped at 0.7 V by D501 after being terminated by R501. After this operation, Q501 and 502 does the switching and a 5Vp-p pulse is output from the collector of Q502. The pulse is then input into pin ⑬ of IC405. VD also goes through a similar circuit, with the pulse being output from the collector of Q504 and input into pin ⑩. The operation of IC405 is controlled according to the modes shown on chart 3; the pulse is output from pins ⑫ and ⑨ and are input into pins ⑬ and ⑩ of IC407.

Chart 3

SLOT SEL (BB-1, 23B)	IC405 Pin ①	IC405 Output Pin ⑫, ⑨
H	H	⑬, ⑩
L	L	⑭, ⑪

On the other hand, in the case of VIDEO inputs, sync sep is handled by board BA. Subsequent to this operation the signals go to connector 4A and 5A of BB-1 and are input into pins ⑭ and ⑪ of IC407. IC407 is controlled according to the modes indicated on chart 4 whereby the outputs go from pins ⑫ and ⑨ and connector 26C and 26A of BB-1.

Chart 4

V. IN SEL (BB-1, 23A)	IC407 Pin ①	IC407 Pin ⑫, ⑨, ⑦
H	L	⑭, ⑪, ⑤
L	H	⑬, ⑩, ⑥

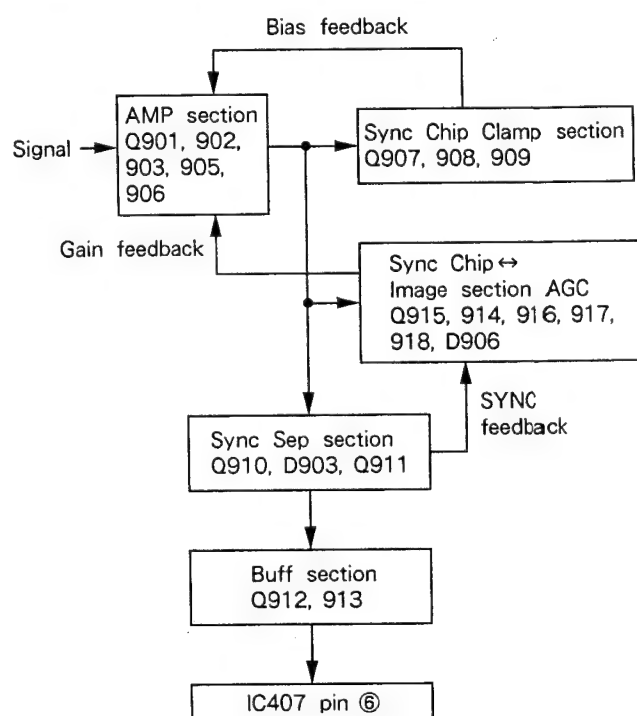
3-2-4. SYNC ON GREEN

G signals from the switcher and from INPUT A and B are, as mentioned earlier, switched by RL402 and input into pin ⑦ of IC401. When the HDVS board is used instead of INPUT A and B, ternary sync pulse is received from connector 16C of BB-1. IC401 is controlled on the basis of the modes shown on Chart 5 and the output comes from pin ④. These output signals pass through C903 and are then sliced by sending them through the AGC circuit. Finally sync sep OUT is output from the buffers of Q912 and 913.

Chart 5

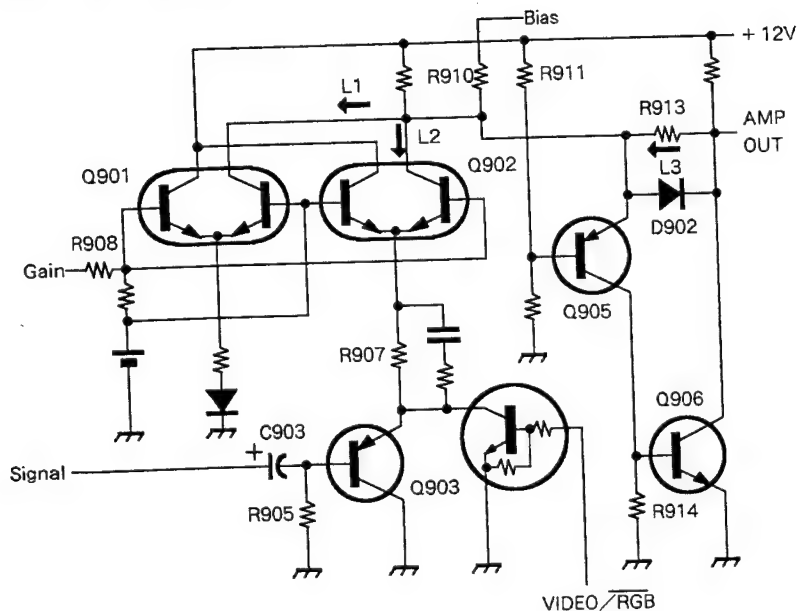
HD SELECT BB-122A	SLOT SELECT	IC401 Pin ④
L	-	Pin ⑦
Open	H	Pin ⑦
Open	L	Pin ②

Sync on Green Sync Sep Block Diagram



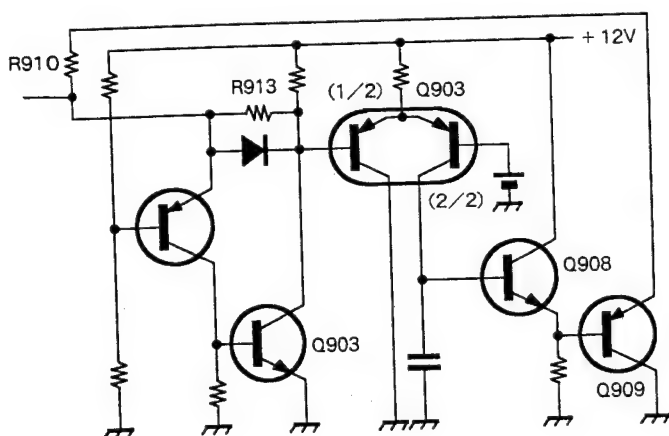
The sync sep output is input into pin ⑥ of IC407. On the other hand, during VIDEO input, H. sync is input into pin ⑤ while pin ⑦ outputs the signals converted by the mode indicated on Chart 4. The converted signals are then input into connector 25C of BB-1.

3-2-5. AMP SECTION



Signals are passed through C903 and the signals biased by R905 are converted to an electric current by Q903. This current goes from R907 and flows to emitter Q902. At this point, the signal current, adjusted by the gain control voltage while passing through R908, flows into the collector of Q902. Meanwhile, since the voltage of collector Q902 is fixed at the base electric potential of Q905 + V_{BE} , return voltage flows from R913 so that this electric potential remains unchanged. A reverse waveform appears on collector Q906. Therefore, the maximum gain can be expressed as $R913/R907$. Also note that D902 is a limiter for instances when the electric potential of collector Q906 becomes lower than the base electric potential of Q905.

3-2-6. BIAS SECTION



Signal appearing on collector Q903 goes into the base of Q907 (1/2) and is compared against the base voltage of Q907 (2/2) (the voltage determined by R918, 921, 928, 933 and 934). As shown in Fig. 1, for example, if the base electric potential of Q907 (2/2) existed on the waveform's sync section electric potential, (2/2) of only the sync section is turned ON and the Q908 base electric potential increases, resulting in an increase of the base of Q909. As a result, the DC current that flows from R910 to Q909 decreases and the electric potential of collector Q903 decreases as well. Finally, R910 releases electric current so that the highest point of the base electric potential of Q907 (1/2) and the base electric potential of Q907 (2/2) are the same.

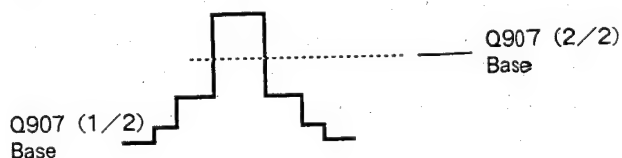
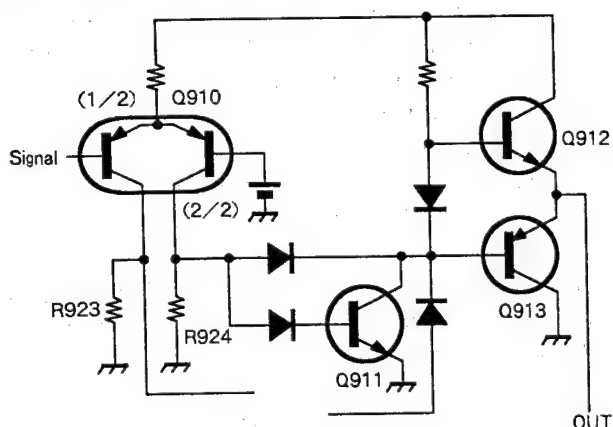


Fig. 1

3-2-7. SYNC SEP SECTION



The signal generated by the AMP section (described earlier) is input into Q910 (1/2) and the DC voltage as determined by R918, 921, 928, 933 and 934 is input into Q910 (2/2). The relationship in voltage between the two is demonstrated in Fig. 2 where it can be seen that Q910 (2/2) is turned ON only starting from the sync section. Other sections become Low. This pulse is switched by Q911 and is extracted as 5V negative composite sync.

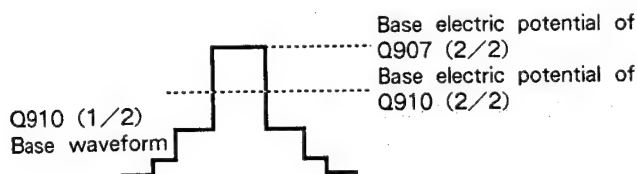


Fig. 2

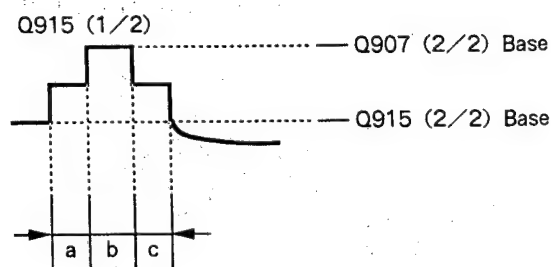
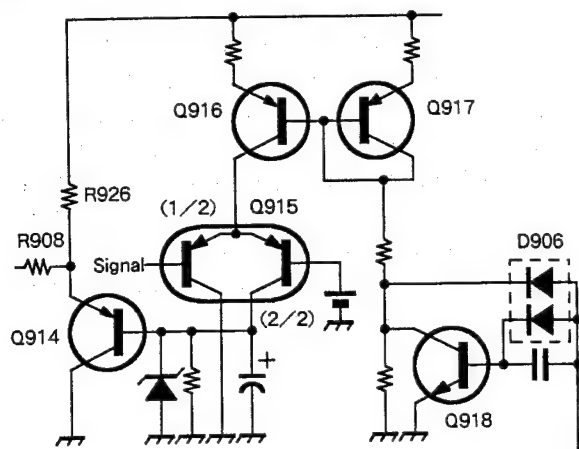


Fig. 3

The output from AMP is input into the base of Q915 (1/2) while the electric potential as determined by R918, R921, 928, 933 and 934 is fed into R915 (2/2). This means that the one with the lower base voltage is turned ON. On the other hand, sync sep out (negative polarity) that appears on collector terminal Q910 (1/2) is input into Q918. This is turned ON only during the time the sync section is operating. Subsequently, current flows into Q917, and the same current flows into Q916. As a result, supposing that a waveform similar to that shown in Fig. 3 is input, Q915 (2/2) is turned ON during a and c, the electric potential of collector Q915 (2/2) as well as that of emitter Q914 increases. When this occurs, as described earlier in the AMP section, the electric potential of the gain control terminal increases, making the AMP's gain increase. It is through this type of operation that the difference in electric potential between the Pedestal section and the sync CHIP section becomes the base electric potential variance between Q907 (2/2) and Q915 (2/2).

3-2-8. GAIN CONTROL SECTION



3-2-9. TERNARY SYNC DISCRIMINATING CIRCUIT

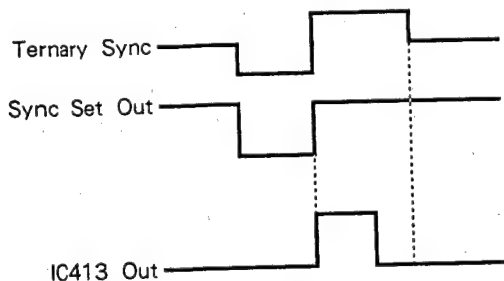
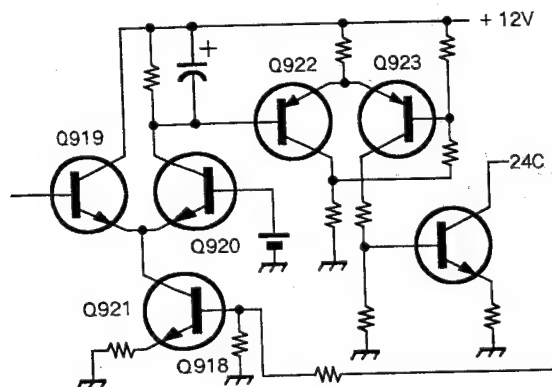


Fig. 4

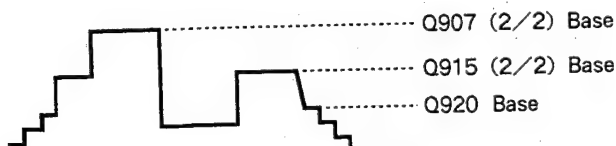


Fig. 5

AGC and clamped signals produced by the previously mentioned sync sep circuit are input into the base of Q910 while the DC voltage shown in Fig. 5 is added to Q920. Furthermore, Q921 is connected to the emitters of Q919, and Q920, and the pulse shown in Fig. 4 is entered into their bases, making the system ON only when the voltage is higher than the pedestal's ternary sync voltage. As a result, whenever ternary sync is input, 920 turns ON only when the voltage is higher than the pedestal's and the electric potential of collector Q920 falls. This is recharged by C911 and transmitted to the base of Q922. Q922 and Q923 are schmitt trigger circuits whereby when the base electric potential of Q922 falls, Q923 becomes OFF, lowering the collector electric potential and turning Q924 OFF.

3-2-10. AUDIO SECTION

The signals connected to the switcher (R, L, MIX signals) are input into pin ② of IC408, 409 via pin ① of connector BB-2. In addition, the R and L signals input into INPUT A and B are fed into 13A and 14A of connector BB-1 and enters pin ⑫ of IC408, 409. IC408 and 409 are controlled by the mode shown in Fig. 6 and output through pin ⑭. The R, L signal is then input into pins ⑥, ④ of IC412, increased or reduced according to the changes in the VOL control terminal voltage of pins ② and ⑧, and output from pins ⑦, ③ as well as from 3C, 3B of connector BB-1.

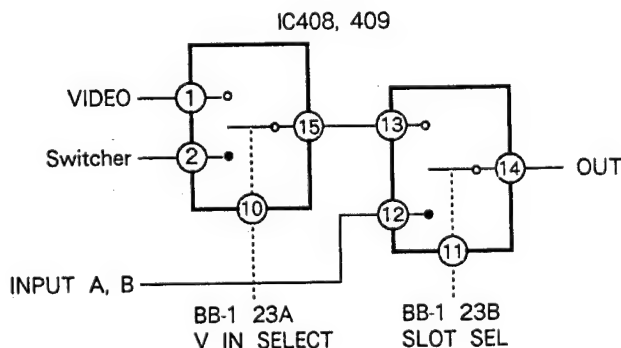


Fig. 6

3-2-11. SIRCS SIGNAL

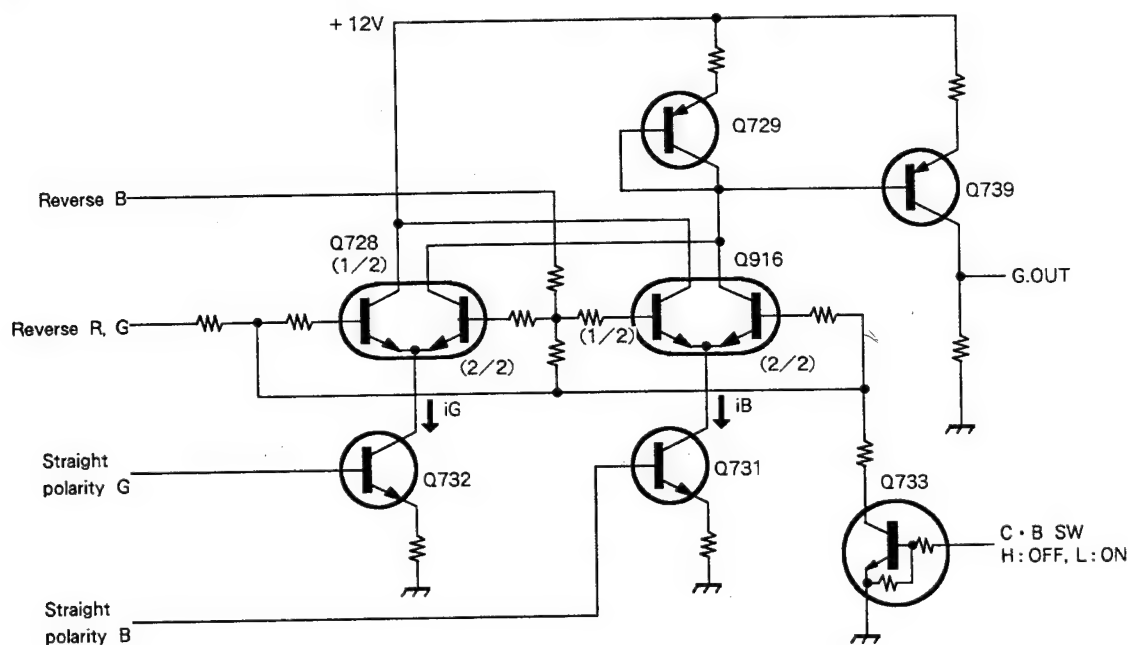
Signal received by the optical receptor of this unit goes into 1C of connector BB-1, the signal from the attached remote control unit to 1B of connector BB-1, and the signal from the switcher are input into pin ② of BB-2 respectively. Signal received at the optical receptor unit takes the following pass: Q450, 451 to SW included in the SIRCS IN terminal, to D450, to Q454 and finally to 23C of connector BB-1. In addition, it is also sent to SIRCS OUT via Q456. At this point, the included SW turns OFF when a terminal is inserted into SIRCS IN, and ON when removed. Therefore, when the terminal is plug the WIRELESS input on the main unit is disabled. Instead, the plug WIRED input signal is sent to D450. On the other hand, the signal from the main unit's remote controller goes into D450 after which it follows the same path. Furthermore, signal from switcher is sent to Q453 and after that is the same.

3-2-12. CLEAR BLUE CIRCUIT

The clamped R (Red) signal appears in reverse waveform at collector Q667. This is sent to Q668 and the G (Green) signal is similarly sent to Q727. As result, the signal that appears on emitter Q668 and 727 is a signal with low base electric potential (signal with a higher image level).

This is sent to the base of Q728 (1/2) and 730 (2/2) via R738 and 747. On the other hand, B (Blue) signal appears in reverse waveform on collector Q737 and is sent to Q736 after which it is sent to the bases of Q728 (2/2) and 730 (1/2) via R740 and 743. At this point, for R and G signals the DC level is determined by the power supply from Q734 when it is reversed. While the DC level for B signal is determined by the power supply from Q735. Furthermore, the emitter of Q728 is connected to collector Q732 and the G signal current flows as result of the G signal input into the base. Likewise, the emitter of Q730 is connected to the collector of Q731 and the B signal current flows as result of the B signal input into the base. First of all, when the C. B SW is in the OFF position Q733 turns ON and the base electric potential of Q728 (1/2) and 730 (2/2) becomes Low. ↗

As result, Q728 (1/2) and Q730 (2/2) turns OFF ; Q728 (2/2) and Q730 (1/2) turn ON ; a reverse waveform of G signal appears on collector Q729 after which it is reversed by Q739 and input into Q688. When C.B SW is ON, the base electric potential of Q728 (1/2) and Q730 (2/2) are compared against the base electric potential of Q728 (2/2) and Q730 (1/2). The transistor with higher base electric potential is turned ON. As result, if the signal level of B signal and R, G signal is compared and if the B signal level is higher Q730 (2/2) and Q728 (1/2) are turned ON and a MIX signal of B signal and G signal is output to collector Q729. In case, the B signal level is lower than the signal level of R,G, Q730 (1/2) and Q728 (2/2) turn ON and only the G signal is output to collector Q729. As shown above, CB operation produces G signal to B signal and turns blue to cyan.



3-2-13. TEST SIGNAL GENERATOR

When the test signal mode is selected, 27C of connector BB - 1 becomes Low and collector Q656 becomes High. It then passes through D652, 653 and turns Q671, 672 ON when R, Q689, 690 when G and Q708, 709 when B and turns OFF the RGB and VIDEO signals. On the other hand, test signal are input into each RGB signal via Q675, 693 and 712.

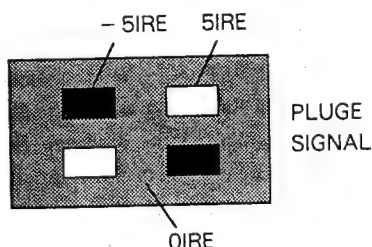
- Signal (hatched, dotted, and other test signal) Generator Section.

ECL signals are input into 28A, 28B of connector BB - 1 and the respective signals are input into Q660, 661. The lighting portion of the test signal turns the Q660 side High and Q661 Low. As result, Q660 and Q665 becomes ON and electric current flows into collector Q654 through a current mirror circuit. Then a voltage is generated by R659, R663, and R655 (described later) and is input into Q652. This signal is added to each of the RGB circuits.

- **C. BRT Signal** (signal that increases or lowers brightness of the image during ZONE MODE) Generator Section.
ECL signals are input into 28C, 29C of connector BB -1 and are respectively input into Q663 and 665. For normal test signals, the base of Q663 becomes Low and since Q665 is already High, Q663 turns ON and current flows through Q664 and Q662. On the other hand, under the ZONE MODE, excluding the area which is to emphasized, the base of Q663 turns High and Q665 becomes Low, making Q663 and Q662 both OFF. As a result, the current that flows through Q660 as well as Q654 decreases, causing the base electric potential of Q652 to fall and the brightness to decrease.
- **BOARDER Signal** (the shadowed portion of the character signal) Generator.
ECL signals are input into 29A, 29B of connector BB -1 and the respective signals are input into the base of Q658, 659. When the mode changes to character signal output mode, the character signal plus the shadow portions turn the base of Q658 High, the base of Q659 Low and Q658 becomes ON. Consequently, the base electric potential of Q657 becomes negative (-) and these are transmitted to the bases of Q659, 694, 713 and Q677, 695, 714 turn ON. For this reason, the RGB signals are cut off by this section and shadow is formed.

3-2-4. PLUGE SIGNAL GENERATOR

Bluge signal is a signal like that shown on the figure on the below. Signal is input from 27A, 27B of connector BB -1 and respectively input into the bases of Q650, 651. For regular TEST signals, 27A is set to High and 27B is set to Low and the transistor on the opposite side of Q650 signal input side turns ON. Electric current then close to R655 and is transmitted to the base of Q652. For this reason, regular TEST signals will have the MIX signal from Q650 and Q654 added to the base of Q652. In the case of pluge mode for the -5IRE section on the diagram, 27A, 27B both turns Low and since no current flows to R655 the electric potential of Q652 falls. For the 5IRE section, 27A, 27B become High and current flows to R655 from both Q650 and 651 causing the electric potential of Q652 to fall. As result, pluge signal is generated.



3-2-15. CHARACTER SIGNAL GENERATOR

Each of the RGB character signal are input as ECL signals into 30A, 30B, 31A, 31B, 30C of connector BB -1. Since the circuit is the same for R, G, and B, the circuit for R only will be explained. Signals input from 30A, 30B are respectively input into the bases Q680, 681. Under normal circumstances, 30A is Low and 30B is High and Q680 is turned ON. Therefore, the base electric potential of Q679 is split by parallel resistance between R703, 961, and R704, 711 and is lower than the electric potential of Q678, causing the input signal to pass through Q678 unchanged and input into Q682. On the other hand, in character mode, the character portion only will have 30A High and 30B Low. Q680 is turned OFF and the base electric potential of Q679 increases. At this point, Q679 turns ON resulting in the input signal and the character signal to be output alternately and input into Q682.

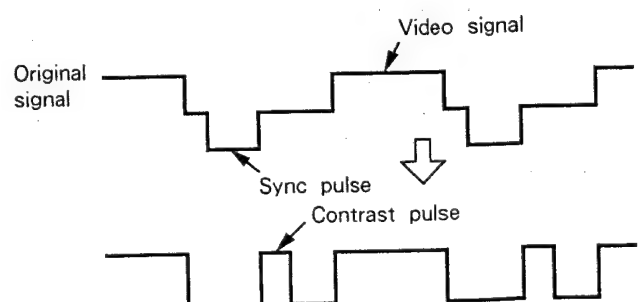
3-3. CIRCUIT BOARDS CA (RG) AND CA (B)

STRUCTURE

The CA (RG) board consists of signal processors for RED and GREEN CH.(BKG, DRV, Contrast, and Brightness controls plus cut off SW, blanking system, and pedestal clamp), video output amplifier, final-stage clamp circuit, automatic background circuit, peak ABL, and single-tube ABL circuit. Note that a gamma correction circuit accompanies the RED CH. The CA (B) board includes these functions for the BLUE CH.: signal processing (same features as for CA (RG) board), gamma correction circuit, video output amplifier, final-stage clamp circuit, automatic background circuit & ABL circuit, and G1 blanking circuit.

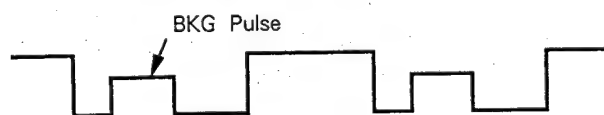
3-3-1. SIGNAL PROCESSING

BKG, DRV, contrast, and Brightness control; cutoff SW; blanking and pedestal clamp signal processing are managed by IC104 (RED CH), IC204 (GREEN CH), and IC304 (BLUE CH). Signals input into pin ② through AC merging are first clamped at backporches and reference pulse (contrast pulse) for gain control (see diagram below) are inserted.

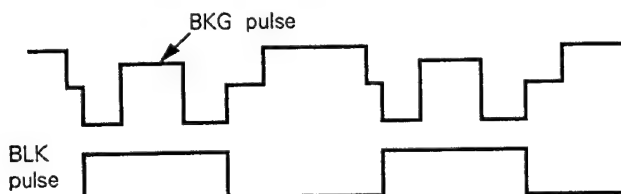


The pulses are then sent through a gain control amplifier (DC control) after which a feedback is applied so that the control pulse becomes as large as a certain reference value. This circuitry enables contrast to be controlled by simultaneously inserting various levels of control pulses while DRV can be controlled by changing the reference value against which the contrast pulse is compared. This circuit design brings about excellent inter-channel tracking performance.

When these processes are completed, instead of the contrast pulse, reference pulses for brightness and background control (BKG Pulse) are inserted. Brightness and background control is carried out by changing the level of this BKG pulse.



As shown in the diagram below, with the exception of the BKG pulse section, blanking is applied by the blanking pulse input from pin ⑤ and the pulse is output from pin ③.



3-3-2. VIDEO OUTPUT AMPLIFIER

This amplifier makes use of hybrid IC VPH05 (IC101, 201, 301) and is comprised of a cascode amplifier and a complimentary buffer. Note that a peaking terminal is provided in pin ③.

3-3-3. FINAL-STAGE CLAMP CIRCUIT

This circuit uses a hybrid IC SNY-8C02 (IC103, 203, 303). As the BKG pulse sector is clamped here, the pedestal level can be adjusted by changing the size of the BKG pulse.

3-3-4. AUTOMATIC BACKGROUND CIRCUIT

(Only the RED CH is explained here, but the explanation is applicable to other CH as well.)

The Ik that is detected by a cathode beam current detecting circuit (comprised of Q104, 105, 106, 107, 112) is converted to voltage and is sent through the voltage follower of IC102 (2/2). The voltage is then S/H'd by Q111 and C119 and the clamp voltage of the previously mentioned final-stage clamp circuit is modified by IC102 (1/2) so that the voltage becomes the same as the reference value.

3-3-5. SINGLE TUBE ABL CIRCUIT

The beam current detected by cathode beam current detecting circuits Q103 (Red), Q203 (Green), and Q303 (Blue) are converted to voltages and respectively integrated. Q16, 17 and 18 determine which RGB voltage is the largest and this voltage is passed through the reverse phase amplifier IC8 (2/2) via Q19. If the voltage is greater than the standard value, Q15 acts to lower the contrast.

3-3-6. PEAK ABL CIRCUIT

Each beam current that is derived from the above RGB cathode beam current detecting circuits is added by IC8 (1/2) and the contrast is lowered by Q14 if greater than the standard value.

3-3-7. Σ ABL CIRCUIT

The ABL voltage detected by the secondary side of the flyback transformer goes into the base of Q30 and is compared against the base voltage of Q31. When the flyback current becomes greater than the standard value, the contrast is lowered.

3-3-8. G1 BLANKING CIRCUIT

The TTL level BLK pulse is amplified to approximately 112Vp-p by circuits Q32 to Q40. They are then supplied to G1 of each of the R.G.B. channels.

3-4. CIRCUIT BOARD DA

The functions of board DA can be divided into the following :

1. AFC Circuit System
2. Waveform Generation
3. Others

3-4-1. AFC CIRCUIT SYSTEM

- (1) H. SHIFT...AFC achieves synchronization by comparing H. SYNC and HD (Horizontal Deflection). When pulse hd is created from HD by shifting a certain phase (τ), and if the AFC is then taken with H. SYNC and hd, the AFC of HD will be shifted by $-\tau$. Therefore, changing τ results in a H. SHIFT.

In practice, the horizontal deflection HD is feedback to connector 7 - b after which it passes through BUFF Q1 and enters IC8, the H. SHIFT circuit. The NOISE content is removed by SW of IC8 and a pulse is produced by IC9 (1/2) using its leading edge as a trigger. Since the integrated value of output (7) of IC9 and $V_{cc}/2$ is compared by IC10 (1/2) and feedback, the second diagram of Fig. 1 becomes a short waveform with a 50% duty factor. This output is once again input into IC9 (2/2) and sent through a similar feedback system. If the phase is controlled using the H. SHIFT voltage ($-2.5V$ to $+2.5V$) from connector 27 - b rather than the comparing voltage $V_{cc}/2$, a movement of $\pm 22\%$ is observed as shown in the third diagram in Fig. 1. By entering this into IC13 and by creating a rectangular waveform with a 50% duty factor, a pseudo HD pulse for AFC use is realized.

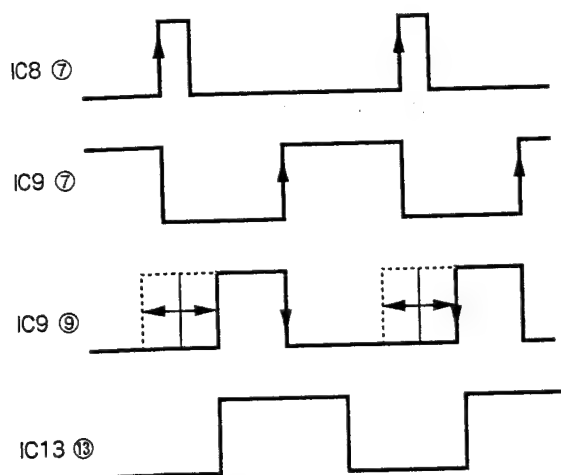


Fig. 1

- (2) V. SHIFT...V. SHIFT uses the same method as V. SHIFT to shift the phase of incoming V. SYNC. The circuit is almost the same as that of H. SHIFT. The V. SYNC of connector 9 - a is delayed by about 1V with IC11, IC12 and the phase shift is accomplished with the V. SHIFT control voltage of connector 27 - c.
- (3) AFC CIRCUIT...IC14 is a hybrid IC that includes a jungle IC and is responsible for AFC and V. HOLD. In terms of its operation, when H. SYNC is fed into pin ⑧ of IC14 it does a F - V conversion and outputs a H. OSC waveform from pin ⑨ of IC14 which corresponds to the frequency's f_0 . RV1 is used to adjust f_0 . For VIDEO operation, pin ① of IC8 becomes "Low", Q27 goes off, and the voltage that is decided by resistor division of RV3, R163, 164 is input into pin ⑤ of IC14. This becomes the f_0 voltage for VIDEO use.
- (4) V. HOLD CIRCUIT...The V. SYNC OUT described in "(2) V. SHIFT" is fed from Q14 to pin ⑪ of IC14. A F - V conversion is done inside IC14 based on this pulse and VD of f_0 corresponding to the input frequency is output from pin ⑫ of IC14.

3-4-2. REGISTRATION WAVEFORM GENERATOR

(1) REGISTRATION IC SECTION...When VD is input into pin ⑤ of IC201 and HD is input into pin ②④, registration waveform is created using the leading edge of the input signal as trigger (Fig. 2-1, 2-2). The peak of V. SAW, H.SAW is determined by the voltage of pin ⑦ and ②⑤ respectively. Since a parabola wave is $SAW \times SAW$, when the SAW amplitude becomes $1/2$ it becomes $1/4$. Other waveforms will become $1/4$, $1/8$ and so forth depending on how many times a multiplication is performed. Pin ③ and pin ④ outputs a rectangular waveform of $1/2H$, $1/2V$ respectively. ↗

(2) V. SIN WAVEFORM...When a full wave rectification is performed with IC208 using the waveform of pin ⑩ of IC201, the waveform of pin ① of IC208 will be like that shown in Fig. 3-a. The parabola wave of pin ⑩ of IC201 is DC-shifted to make the output of pin ① of IC209 as shown in Fig. 3-b. Q205 to 212 comprise a multiplier and when Fig. 3-a and 3-b are entered into this multiplier, a waveform similar to the one shown in Fig. 3-c is produced. This will be divided by IC210 to make the first half of V-scan into V. SIN 1 and the latter half into V. SIN 2.

(3) H. SIN WAVEFORM...As with V. SIN waveform H. SAW will be full-wave rectified using IC217 while H. PARA will be DC-shifted with IC215. Each of these are multiply by Q213 to 220 to create waveforms similar to V. SIN.

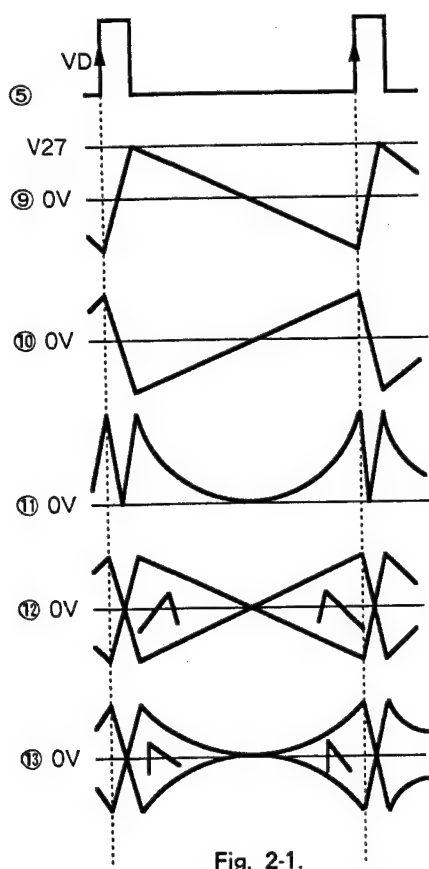


Fig. 2-1.

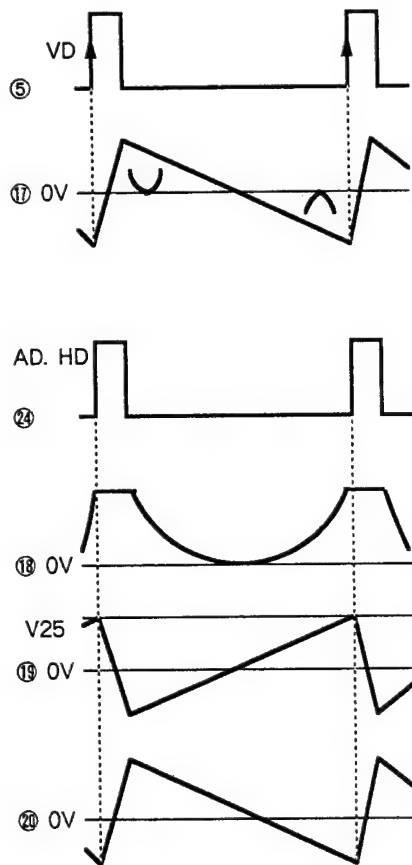


Fig. 2-2.

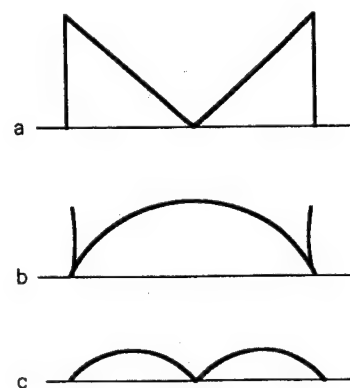


Fig. 3.

3-4-3. OTHERS

- (1) AD. HD ... Registration correction is affected by eddycurrent. To rectify this problem registration waveforms are created by advancing the waveform by 1 to 2 μ s. The horizontal deflection of HD is input into pin ④ of IC3. A constant that will become approximately 3 to 4 μ s will be used and integrated (pin ⑥ of IC3). Next the horizontal deflection of HD is input into pin ⑪ of IC3 and a pulse created using the leading edge as trigger. This \bar{Q} output will be integrated and the result of previous integration will be compared against IC4. Since a feedback is applied, the pulse width of pin ⑥ and ⑨ of IC3 will be the same. As a result, the pulse width of pin ⑨ of IC3 will become 3 to 4 μ s. Because the original HD (pin ⑪ of IC3) is about 2 μ s, the net effect on the pulse of pin ⑨ of IC3 will be an advancement of 1 to 2 μ s. This will be input into IC201 to create a horizontal registration correction waveform.

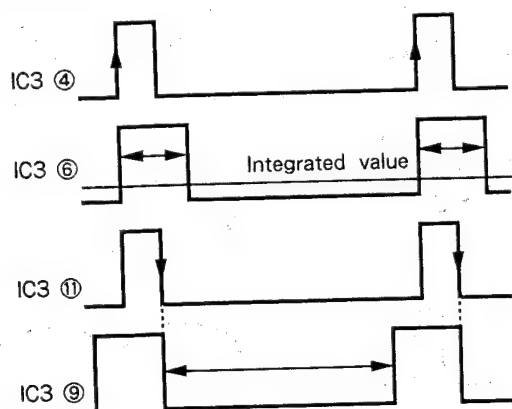


Fig. 4

(2) BLK (Blanking) PULSE

- 1) V. BLK...The position of BLK has been fixed so that even if the size is altered, the on-screen position of BLK will not change. By performing slice and comparing operations on a certain level of V. SAW, a pulse such as BLK 1 that is shown in Fig. 5 is created (IC220). If the bias of BLK (T) in Fig. 5 is changed, the width of BLK 1 alters. V. BLK is structured by adding a retrace line, as well as VD and V. Pulse so that BLK is effected during a V. STOP.

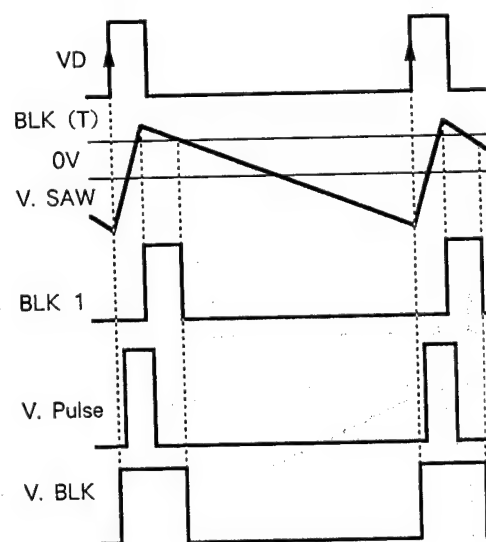


Fig. 5

- 2) H. BLK...Although similar to V. BLK in principle, since H. SAW is created with AD. HD, if the pulse created by slicing H. SAW with H. BLK (R) and if HD is added to create H. BLK, the phase of the two BLK Pulses will not align as shown in Fig. 6, H. BLK 1. For this reason, H. BLK will be created by padding HD.
- A pulse is created by shifting the voltage level of connector 25 - c and shifting H. SAW (Fig. 7 H. BLK 2). Voltage A will be defined to be the voltage resulting from integration. BLK (R) is created as follows. First add HD to pin ⑩ of IC5 and create a pulse using the leading edge as a trigger. Then take the integrated value of output \bar{Q} (pin ⑨), compare it against A in the foregoing, and apply a feedback until the same integration value is obtain. BLK (L) is created in the same manner.

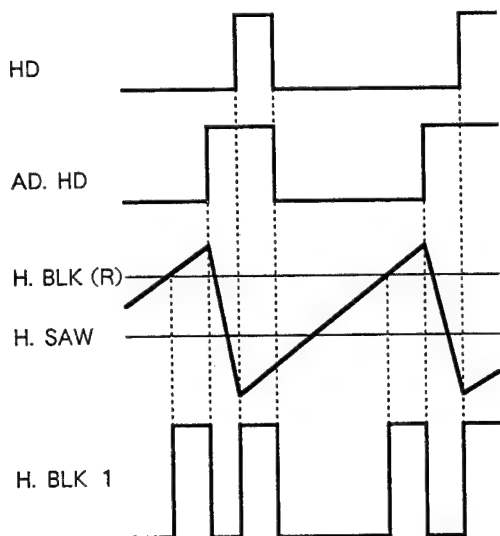


Fig. 6

- 3) C. BLK...Feed BLK Pulses V. BLK (1) and H. BLK (2) through the decoder circuit. C. BLK will be output from pin ⑮ (OUT). Pin ⑮ is an OR output which becomes "Low" only when pins ①, ②, ③, and ⑥ are also Low.

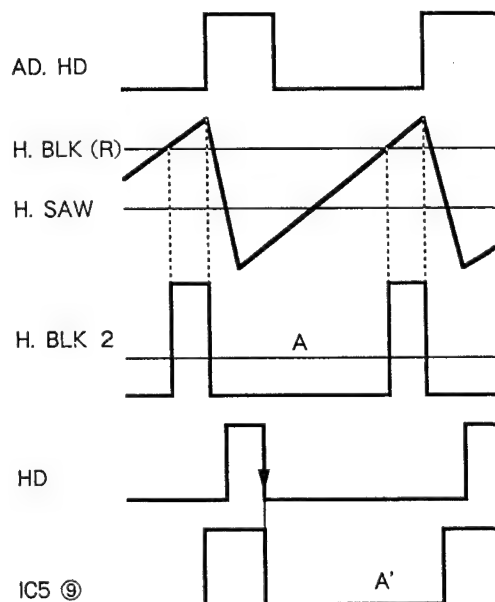


Fig. 7

- (3) SIZE ABL CIRCUIT...Since ABL circuit is a total high - voltage limiter, when its size is halved, the current density per unit area is doubled. This can become the cause for partial burning of the tube surface and cracking of the CRT due to heat concentration. This set has a particularly wide size range, the current density can become several times larger. For this reason, a SIZE ABL circuit, which keeps the current density per unit area fixed, was added. Control voltage H. SIZE and V. SIZE are multiplied and the result added to the ABL detection point, as shown in Fig. 8. As a result, the detecting voltage is changed. The ABL is therefore being changed through the use of SIZE.

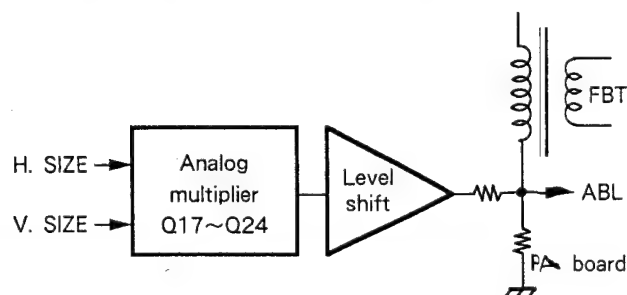


Fig. 8

3-5. CIRCUIT BOARD DB

This board incorporates functions of conventional registration matrix VR as well as those of various other control VRs. The features of D/A converter MB86023 are as follows :

Pins ① to ⑧	... DATA input (standard input)
Pins ⑨ and ⑩	... control terminal that selects 1 of 4 possible outputs
Pin ⑪	... reads DATA upon receipt of a pulse
Pin ⑫	... activated when low
Pin ⑬	... digital GND
Pin ⑭	... analog GND
Pin ⑮	... -5V
Pins ⑯ to ⑲	... output
Pin ⑳	... input for reference voltage
Pin ㉑	... +5V

The voltage produced in reference to input voltages V1 is -V1 for DATA 00, 0 for DATA 80, and V1 for DATA FF. IC501 to 504 are buffers while IC505 to 510 are address decoders. The output and the name associated with each signal are shown below :

IC511 ⑱ H.SIZE ⑳ H.CENT (G) 1 ㉑ H.CENT (R) 1 ㉒ H.CENT (B) 1	IC512 ⑱ H.SHIFT ⑳ H.CENT (G) 2 ㉑ H.CENT (R) 2 ㉒ H.CENT (B) 2
IC513 ⑱ H.KEYS ⑳ H.SKEW (G) ㉑ H.SKEW (R) ㉒ H.SKEW (B)	IC514 ⑱ H.PIN ⑳ H.BOW (G) ㉑ H.BOW (R) ㉒ H.BOW (B)
IC515 ⑱ --- ⑳ H.SIZE (G) ㉑ H.SIZE (R) ㉒ H.SIZE (B)	IC516 ⑱ H.LIN BIAS (R) ⑳ H.LIN (G) ㉑ H.LIN (R) ㉒ H.LIN (B)
IC517 ⑱ V.KEYS BIAS (B) ⑳ --- ㉑ V.KEYS H (R) ㉒ V.KEYS H (B)	IC518 ⑱ --- ⑳ --- ㉑ H.PIN (R) ㉒ H.PIN (B)
IC519 ⑱ V.SIZE ⑳ V.CENT (G) 1 ㉑ V.CENT (R) 1 ㉒ V.CENT (B) 1	IC520 ⑱ V.SHIFT ⑳ V.CENT (G) 2 ㉑ V.CENT (R) 2 ㉒ V.CENT (B) 2

IC521 ⑱ V.SIZE BIAS ⑳ V.SIZE (G) ㉑ V.SIZE (R) ㉒ V.SIZE (B)	IC522 ⑱ V.LIN BIAS ⑳ V.LIN (G) ㉑ V.LIN (R) ㉒ V.LIN (B)
IC523 ⑱ --- ⑳ V.SKEW (G) ㉑ V.SKEW (R) ㉒ V.SKEW (B)	IC524 ⑱ --- ⑳ V.BOW (G) ㉑ V.BOW (R) ㉒ V.BOW (B)
IC525 ⑱ V.KEYS BIAS (R) ⑳ V.KEYS (G) ㉑ V.KEYS (R) ㉒ V.KEYS (B)	IC526 ⑱ --- ⑳ V.PIN (G) ㉑ V.PIN (R) ㉒ V.PIN (B)
IC527 ⑱ --- ⑳ H.ZONE 2 (G) ㉑ H.ZONE 2 (R) ㉒ H.ZONE 2 (B)	IC528 ⑱ --- ⑳ H.ZONE 3 (G) ㉑ H.ZONE 3 (R) ㉒ H.ZONE 3 (B)
IC529 ⑱ H.ZONE 4 BIAS ⑳ H.ZONE 4 (G) ㉑ H.ZONE 4 (R) ㉒ H.ZONE 4 (B)	IC530 ⑱ H.ZONE 5 BIAS ⑳ H.ZONE 5 (G) ㉑ H.ZONE 5 (R) ㉒ H.ZONE 5 (B)
IC531 ⑱ --- ⑳ H.ZONE 6 (G) ㉑ H.ZONE 6 (R) ㉒ H.ZONE 6 (B)	IC532 ⑱ H.ZONE 7 (G) ㉑ H.ZONE 7 (R) ㉒ H.ZONE 7 (B)
IC533 ⑱ H.ZONE 8 (G) ㉑ H.ZONE 8 (R) ㉒ H.ZONE 8 (B)	IC534 ⑱ H.ZONE 9 (G) ㉑ H.ZONE 9 (R) ㉒ H.ZONE 9 (B)
IC535 ⑱ V.ZONE 2 (G) ㉑ V.ZONE 2 (R) ㉒ V.ZONE 2 (B)	IC536 ⑱ V.ZONE 3 (G) ㉑ V.ZONE 3 (R) ㉒ V.ZONE 3 (B)
IC537 ⑱ V.ZONE 4 (G) ㉑ V.ZONE 4 (R) ㉒ V.ZONE 4 (B)	IC538 ⑱ V.ZONE 5 (G) ㉑ V.ZONE 5 (R) ㉒ V.ZONE 5 (B)
IC539 ⑱ V.ZONE 6 (G) ㉑ V.ZONE 6 (R) ㉒ V.ZONE 6 (B)	IC540 ⑱ V.ZONE 7 (G) ㉑ V.ZONE 7 (R) ㉒ V.ZONE 7 (B)

IC541 ①② --- ①③ V.ZONE 8 (G) ①④ V.ZONE 8 (R) ①⑤ V.ZONE 8 (B)	IC542 ①③ --- ①④ V.ZONE 9 (G) ①⑤ V.ZONE 9 (R) ①⑥ V.ZONE 9 (B)
IC543 ①④ SHARPNESS ①⑤ COLOR ①⑥ HUE ①⑦ VOLUME	IC544 ①④ DRIVE (G) ①⑤ DRIVE (R) ①⑥ DRIVE (B) ①⑦ CONTRAST
IC545 ①④ BACK GROUND(G) ①⑤ BACK GROUND(R) ①⑥ BACK GROUND(B) ①⑦ BRIGHT	IC546 ①④ BLANKING (T) ①⑤ BLANKING (B) ①⑥ BLANKING (L) ①⑦ BLANKING (R)

3-6. CIRCUIT BOARD DC

The DC board consists of : (1) V. OUT circuitry. and (2) SUB. OUT circuitry.

(1) V. OUT circuitry.

(2) SUB. OUT circuitry.

Both circuits are common for R, G, and B.

3-6-1. V. OUT CIRCUITRY

1) V. OUT---consists of μ PC4558 and μ PC1498. As it is common to all 3 channels, here the G - ch will be explained. A V. OUT waveform is input into pin ③ of connector DC - 2 from the DB board.(Fig. 1 A). Although this is input into pin ③ of IC5, since pin ② of IC5 is a GND, a waveform similar to the one shown in B (Fig. 1) is feedback and pin ③ of IC5 becomes a GND.

Any voltage error that exists between pins ② and ③ of IC5 will be output from pin ① of IC5 (Fig. 1 C) and is received by pin ④ of IC6. The output is through pin ② and a electric current like the one shown in B (Fig. 2) flows. As a result a voltage waveform similar to D (Fig. 1) is generated. E (Fig. 1) is the pulse power supply, and is created by μ PC1498 which detects the erroneous portion of the pulse of the input waveform C (Fig. 1) and by accumulating D5 and D10.

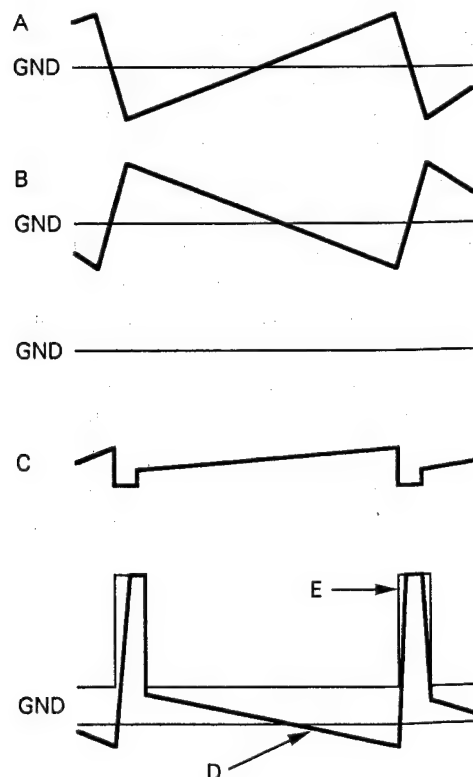


Fig. 1

- 2) V. STOP PROT...Slice the pulse at the output (pin ② of IC6) V. OUT. If C14 does not exist, the waveform of collector Q2 will be a pulse waveform such as in A (Fig. 2). Practically - speaking, it will be integrated by C14 and become a saw wave like the one in B (Fig. 2). If an abnormality is encountered in V. deflection, as shown in D (Fig. 1), the pulse voltage will disappear and the Q2 collector will attach to +B. When this happens, C14 gradually gets charged as shown by the dotted points in B (Fig. 2) and exceeds the pin ⑥ IC5 which is the comparing voltage, causing pin ⑦ of IC5 to become H, Q4 to turn ON, and Q5 to turn OFF. This is the V. STOP mode.

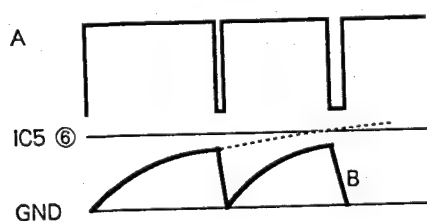


Fig. 2

- 3) V. PULSE...To output V. PULSE for V. BLK use, slice the V. OUT pulse with IC9 and feed it through D10 and Q6. Note that V. STOP signal is added at D9 so that a BLK is applied during V. STOP.

3-6-2. SUB OUT CIRCUITRY

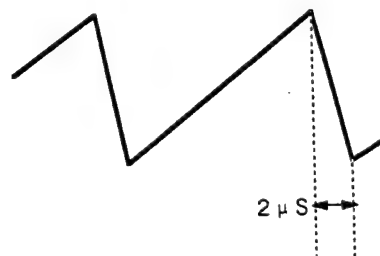
- 1) SUB OUT...Since all of the 6 channels (R, G, B, H. SUB, V. SUB) uses the same circuit, we will explain about H. SUB (R) in this section. The waveform input int pin ① of connector DC - 3 will be amplitude - adjusted by IC101. IC301 is a reverse adjustment circuit provided as protection against current overloads. Pin ② of IC301 is the input while pin ③ is the return. Pin ⑥ is the OUT for the voltage error between input and output. As frequency performance is important, the gain for operational amplifier will be kept Low and a discrete amplifier used. For the discrete amplifier section also, we have used an active load rather than a negative load. This constant - current circuit is comprised of D302, Q301, and R318, and has a current flow of 18mA.

- 2) PULSE POWER SOURCE...The current required to produce a correcting waveform with a retrace of $2 \mu s$ and H. SAW waveform with $1.5A_{p-p}$ will be $-30V$, as the following shows :

$$V = -L \frac{di}{dt} = -40 (\mu H) \frac{1.5 (A)}{2 (\mu S)} = -30V$$

For this reason, PULSE power supply is used only for return lines.

AD. HD is added to pin ① of connector DC - 13, and the + side PULSE created at Q105 and the - side PULSE at Q105. The PULSE power supply is produced by adding $\pm 15V$ to each of these PULSES.



- 3) CURRENT LIMITER...This is a limiter circuit for negative overloads on $\pm 15V$ lines. The $+15V$ side is made up of Q9, R64, and 76. When current flows through the base - emitter resistance and exceeds the transistor's V_{BE} , Q9 is turned ON and is added to V. STOP PROT. The limiter current is approximately 4A. Same for the $-15V$ side.

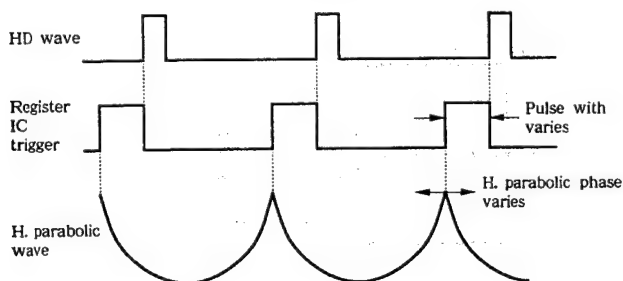
3-7. CIRCUIT BOARD DD

The DD board has the following two functions.

- Generation of H. parabolic sine wave for magnet focus (MG focus)
- Generation of zone correction wave

3-7-1. GENERATION OF H. PARABOLIC SINE WAVE FOR MAGNET FOCUS

The H. parabolic sine wave for magnet focus is generated in the IC3 register IC. For generating the H. parabolic sine wave, it would be enough to input the HD pulse into the register IC as a trigger, but since it is necessary to control the phase of the H. parabolic wave with phase adjustment, a separate pulse is made from the HD pulse with the IC1 monostable multivibrator and used as the trigger for the register IC. The pulse width is controlled with DC voltage from the outside. The IC trigger timing is varied by varying the pulse width and the phase of the H. parabolic wave is controlled by the external DC voltage. Here the register IC is used exclusively as a generator for the H. parabolic wave for magnet focus.



The DC H. Phase signal from the outside is applied to the base of constant current source Q3. The value of H. Phase varies the collector current at pin ① of Q3, which in turn varies the slope of the sawtooth wave generated at C02, and this varies the width for the pulse output from monostable multivibrator IC1. The inverse of this pulse (pin ⑨ of IC1) is integrated and compared with the result of integrating register IC trigger pulse (pin ⑦ of IC1) non-inverted output (pin ⑥ of IC1). The result generates a sawtooth wave at C09 with constant current source Q4 as the power source. A loop is formed in which the slope of this sawtooth wave determines the width for the register IC trigger pulse (pin ⑦ of IC1).

This trigger pulse is input to pin ② of register IC3 as a trigger and the H. parabolic wave is output from pin ⑩. The amplitude of the H. parabolic wave must be varied according to the size of H. Size, so the DC H. Size signal is input at pin ⑤ of the register IC to control the gain.

The H. parabolic waveform output from pin ⑩ of the register IC is amplified by IC2 (1/2) and output. In IC2 the level is set so that when the horizontal size is maximum, the amplitude is 3V.

3-7-2. ZONE CORRECTION WAVE GENERATION

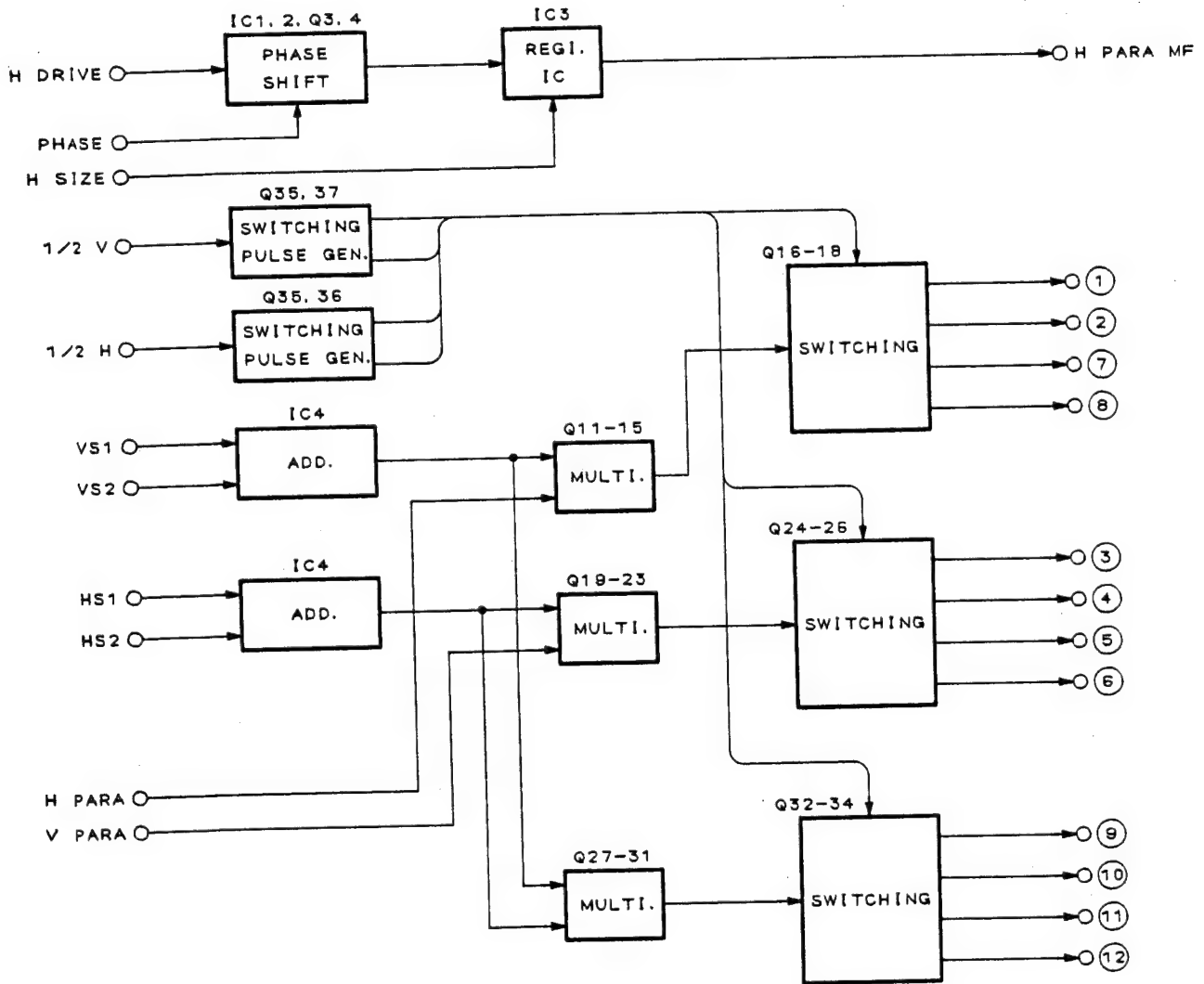
The 12 types of waves for zone correction are generated with multipliers and switching circuits. Q35 through Q37 generate the pulses needed for 1/2V and switching in the switching circuits. A 1/2V pulse is input to one of the bases of the pair of Q37 transistors and the standard DC voltage is applied to the other base. 1/2V pulses with different phases are taken out from the collectors. 1/2H pulses with different phases are taken out in the same way from the collectors of the pair of Q36 transistors.

IC4 (1/2) subtracts half-cycle sine wave VS2 from half-cycle sine wave VS1 and in the same way IC4 (2/2) adds HS1 and HS2.

Q11 - 15, Q19 - 23, and Q27 - 31 comprise multipliers. Q11 - 15 multiply VS1 - VS2 and the H. parabolic signal. The result is taken out from pin ① of Q13 as a current signal. This current is switched with 1/2V and 1/2H timing in the switching circuit comprising Q16 - 18 and four types of corrected waves are taken from the correctors of the pair of Q17 and Q18 transistors as voltage signals.

Q19 - 23 multiply HS1 + HS2 and the V. parabolic signal. The result passes through the switching circuit comprising Q24 - 26 and four types of corrected waves are taken from the correctors of the pair of Q25 and Q26 transistors. Q27 - 31 multiply VS1 - VS2 and HS1 + HS2. The result passes through the switching circuit comprising Q32 - 34 and four types of corrected waves are taken from the correctors of the pair of Q33 and Q34 transistors.

DD Board Block Diagram



3-8. CIRCUIT BOARD DE

The DE board synthesizes the attenuation waves for the zone correction and magnet focus correction waves. Here is an explanation of these functions.

3-8-1. OPERATIONS

The zone correction wave and magnet focus correction wave attenuation is carried out by digital attenuators (MB86023) IC510 - 536. Data signals D0 - D7, address signals A0 - A7, and the WR write clock are input and are sent through the buffer (HD74HC244) comprising IC501 - 504. Of the signals that have passed through the buffer, data signals D0 - D7, address signals A0 and A1, and the writing clock WR are sent directly to the digital attenuator circuit comprising IC510 - 536. Address signal A2 - A7 are decoded by the address decoder (HD74HC138) comprising IC505 - 509 and input to the CE pin of the digital attenuator circuit comprising IC510 - 536 to select the chip.

The digital attenuator (MB86023) has four channels of 8-bit voltage output D/A converters and data latch and output buffer circuits for each channel. Each channel operates independently with the channel selected by A0 and A1.

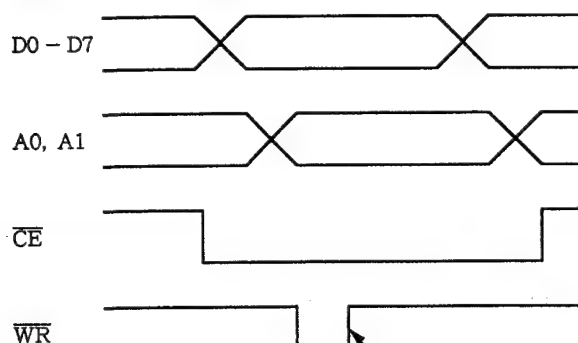
Of these four channels, one each is allocated to R, G, and B.

< Channel selection >

A0	A1	ch
L	L	0 (B)
H	L	1 (R)
L	H	2 (G)
H	H	3

When the CE signal is Low at the rising edge of the write clock WR, the data from D0 to D7 is written.

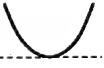



< Data setting timing >



Data is read in and the analog output changes.





ICs 510 - 517 and 526 - 529 attenuate the horizontal zone correction wave and ICs 518 - 525 and 533 - 536 attenuate the vertical zone correction wave.

The zone correction wave is input to each digital attenuator and the digital attenuator channel corresponding to address signals A0 - A7 is selected. The input zone correction wave is attenuated according to the value of data signals D0 - D7.

Input wave	Data (D0 - D7)	Output wave
Example : parabolic wave 	00	
	80	
	FF	

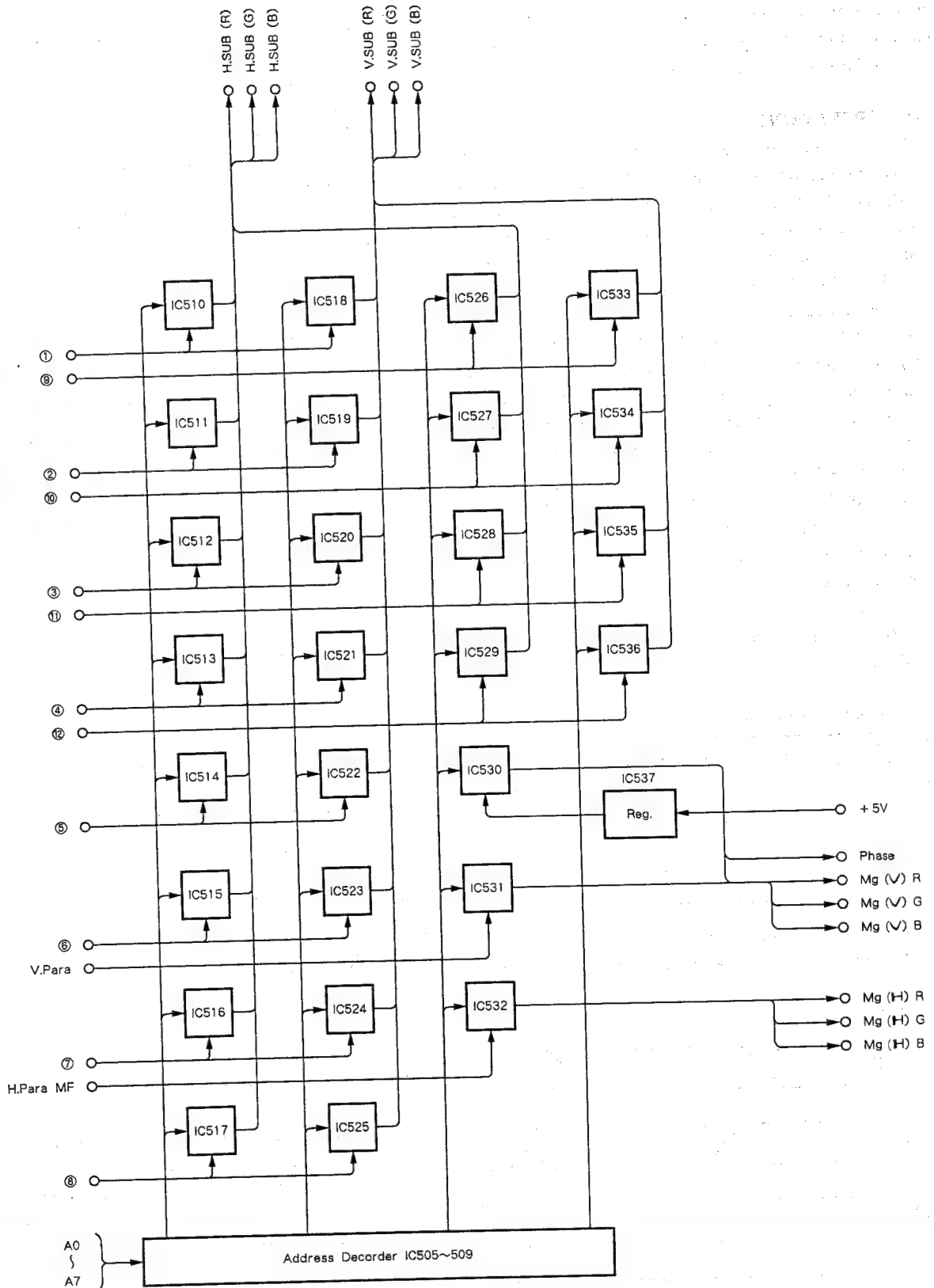
When the data is 00, the output wave is the input wave inverted; when the data is 80, the output wave is 0; and when the data is FF, the output wave is the same as the input wave. IC530 - 532 attenuate the magnet focus wave.

The DC signal is input to IC530, the V. parabolic signal is input to IC531, and the H. parabolic signal is input to IC532. Each is attenuated according to the data. A bias component is added to the V. parabolic and H. parabolic signals, so that when the data is 00, the output wave is 0; when the data is 80, the output wave is 1/2 the input wave; and when the data is FF, the output wave is the same as the input wave.

Input wave	Data (D0 - D7)	Output wave
H. parabolic wave V. parabolic wave 	00	
	80	
	FF	

The output from IC501 - 536 is added in the IC538 - 542 operational amplifier and output as the V. SUB (R), V. SUB (G), V. SUB (B), H. SUB (R), H. SUB (G), H. SUB (B), MF (R) V, MF (G) V, MF (B) V, MF (R) H, MF (G) H, and MF (B) H.

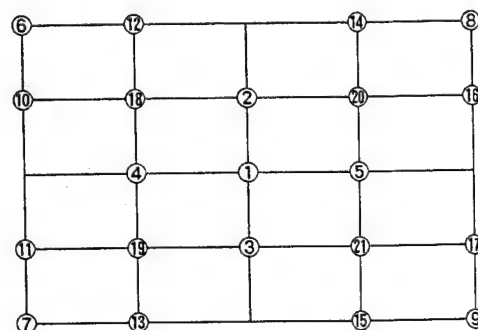
DE Board Block Diagram



3-8-2. DIGITAL ATTENUATOR (IC510 - IC536) ALLOCATION

IC510 ⑩ ZONE ⑩ H-B ⑪ ZONE ⑩ H-R ⑫ ZONE ⑩ H-G ⑬ ---	IC511 ⑩ ZONE ⑪ H-B ⑪ ZONE ⑪ H-R ⑫ ZONE ⑪ H-G ⑬ ---
IC512 ⑩ ZONE ⑫ H-B ⑪ ZONE ⑫ H-R ⑫ ZONE ⑫ H-G ⑬ ---	IC513 ⑩ ZONE ⑬ H-B ⑪ ZONE ⑬ H-R ⑫ ZONE ⑬ H-G ⑬ ---
IC514 ⑩ ZONE ⑭ H-B ⑪ ZONE ⑭ H-R ⑫ ZONE ⑭ H-G ⑬ ---	IC515 ⑩ ZONE ⑮ H-B ⑪ ZONE ⑮ H-R ⑫ ZONE ⑮ H-G ⑬ ---
IC516 ⑩ ZONE H-B ⑪ ZONE H-R ⑫ ZONE H-G ⑬ ---	IC517 ⑩ ZONE H-B ⑪ ZONE H-R ⑫ ZONE H-G ⑬ ---
IC518 ⑩ ZONE ⑩ V-B ⑪ ZONE ⑩ V-R ⑫ ZONE ⑩ V-G ⑬ ---	IC519 ⑩ ZONE ⑪ V-B ⑪ ZONE ⑪ V-R ⑫ ZONE ⑪ V-G ⑬ ---
IC520 ⑩ ZONE ⑫ V-B ⑪ ZONE ⑫ V-R ⑫ ZONE ⑫ V-G ⑬ ---	IC521 ⑩ ZONE ⑬ V-B ⑪ ZONE ⑬ V-R ⑫ ZONE ⑬ V-G ⑬ ---
IC522 ⑩ ZONE ⑭ V-B ⑪ ZONE ⑭ V-R ⑫ ZONE ⑭ V-G ⑬ ---	IC523 ⑩ ZONE ⑮ V-B ⑪ ZONE ⑮ V-R ⑫ ZONE ⑮ V-G ⑬ ---
IC524 ⑩ ZONE ⑯ V-B ⑪ ZONE ⑯ V-R ⑫ ZONE ⑯ V-G ⑬ ---	IC525 ⑩ ZONE ⑰ V-B ⑪ ZONE ⑰ V-R ⑫ ZONE ⑰ V-G ⑬ ---
IC526 ⑩ ZONE ⑱ H-B ⑪ ZONE ⑱ H-R ⑫ ZONE ⑱ H-G ⑬ ---	IC527 ⑩ ZONE ⑲ H-B ⑪ ZONE ⑲ H-R ⑫ ZONE ⑲ H-G ⑬ ---
IC528 ⑩ ZONE ⑳ H-B ⑪ ZONE ⑳ H-R ⑫ ZONE ⑳ H-G ⑬ ---	IC529 ⑩ ZONE ㉑ H-B ⑪ ZONE ㉑ H-R ⑫ ZONE ㉑ H-G ⑬ ---

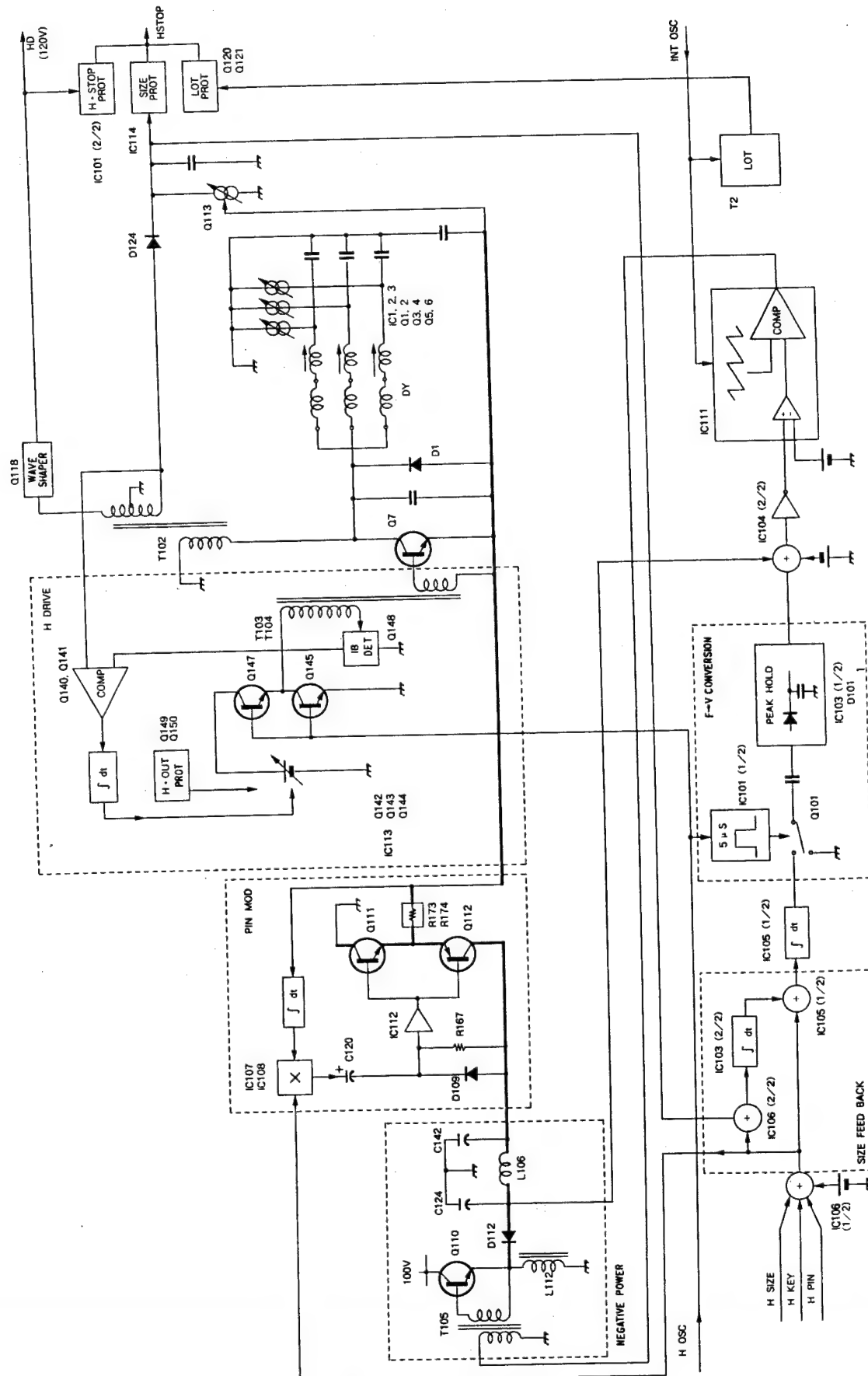
IC530 ⑩ M.F.(DC)-B ⑪ M.F.(DC)-R ⑫ M.F.(DC)-G ⑬ PHASE	IC531 ⑩ M.F.(V)-B ⑪ M.F.(V)-R ⑫ M.F.(V)-G ⑬ M.F.(V)-max (固定)
IC532 ⑩ M.F.(H)-B ⑪ M.F.(H)-R ⑫ M.F.(H)-G ⑬ M.F.(H)-max (固定)	IC533 ⑩ ZONE ⑱ V-B ⑪ ZONE ⑱ V-R ⑫ ZONE ⑱ V-G ⑬ ---
IC534 ⑩ ZONE ⑲ V-B ⑪ ZONE ⑲ V-R ⑫ ZONE ⑲ V-G ⑬ ---	IC535 ⑩ ZONE ㉒ V-B ⑪ ZONE ㉒ V-R ⑫ ZONE ㉒ V-G ⑬ ---
IC536 ⑩ ZONE ㉓ V-B ⑪ ZONE ㉓ V-R ⑫ ZONE ㉓ V-G ⑬ ---	



Zone adjustment points ①-②

* The DE board handles attenuation of ⑩-㉑. The DB board handles attenuation of ②-⑨.

3-9. CIRCUIT BOARD E



3-9-1. F-V CONVERSION

H - KEY, H - PIN and H - SIZE are input through E - 1 connector and added at IC106 (1/2). This output, (a) passes R131 and is input to IC105. (b) is input to IC106 (2/2) and compared with H - SIZE detection output. The error difference is input to IC103 (2/2) and fully integrated and amplified, which then passes R186 and is input to IC105. It is again fully integrated at IC105 (1/2). This DC passes R103 and switched by Q101. IC101 (1/2) generates pulse which is synchronous to 5 μ s width fH and inputs it to Q101 gate. Here, voltage proportional to H - SIZE voltage and fH, is generated. This output passes IC102 buff, is integrated at R111, C105, R109 and C104, and output at IC104 (1/2) to complete F - V conversion.

3-9-2. NEGATIVE POWER SECTION

F - V conversion output and negative power is compared at IC104 (2/2) and added to IC111 pin ①. IC105 (2/2) generates bias and adds it to IC104 (2/2). IC111 is a switching regulator IC, and outputs pulse which complies to pin ④ and pin ① voltage, to pin ⑦. This pulse is switched at Q109 and drives Q107, 108, and the output drives Q110 through T105. Pulse output to Q110 source is rectified at D112, C124 to generate negative power. R208 is for current detection and IC111 pin ⑤ is connected at top end to protect against over current.

3-9-3. PIN MOD SECTION

H - KEY, H - PIN correction wave is input through E - 1 connector, added at IC106 (1/2) and output from pin ⑦. This output passes IC110 and is input to IC107 pin ④. On the other hand, PIN MOD OUT voltage divided by R150, R285 and R149 is input to IC107 pin ⑨. With these two inputs, PIN MOD correction voltage which corresponds to fH and H - SIZE is output to IC107 pin ④. This output is amplified at IC108, passes Q103 and Q104 buff, and is input to IC112. When this occurs, PIN MOD correction wave is clamped to negative power by IC109. IC112 operates around negative power electric potential. Q111, 112 are driven by voltage output from IC112 pin ① and PIN MOD OUT voltage is output to Q111, 112 source.

3-9-4. H-DRIVE SECTION

H. OSC is input from E - 1 connector pin ⑤, passes R233 and input to Q130, 131 base. The signal is divided into two by Q130, 131 emitter. One signal passes C161 and input to Q145 gate. Q145, 146, 147 are Trs for Per - Drive. These Trs switch Q7 (H.OUT) through T103, 104 (HDT). The other signal passes R234 and is input to IC113 (1/2). IC113 output pulse becomes saw - tooth wave at R238, C150. Q132 is a constant current source. Pulse is compared at Q133 and 134 to control Q132 constant current source and keep saw - tooth wave amplitude constant.

This saw - tooth wave and IB2 constant circuit output voltage, which will be explained later, are compared at IC113 (2/2) and the pulse difference is output to IC113 pin ⑦. This pulse passes Q135, 136 buff and input to Q142 gate. Q142, D118 and C159 construct a STEP UP regulator. Normally, 100V is supplied to Q143 and Q144 collector, but when Q142 switch, the additional voltage is supplied to Q143 and Q144 collector, Q144 emitter is connected to Q146, 147 collector. Normally, 100V power is supplied through Q143, 144 series regulator, but when more drive is needed, Q142 operates to supply power over 100V.

IB2 Constant Circuit

Current (IB) which flows on the primary side of T103, 104 (H. D. T) is detected at R267, 268 and generated as voltage at Q148 collector. This voltage passes R225 and input to Q140 base. In the meantime, H. O. T. secondary side H. Pulse divided by R259, 260 and R259 is input to Q141 base. By comparing the peak voltage of the two, IB2 is always remained constant.

- H. Pulse > At IB2 peak (under - drive)
Q140 cut off \rightarrow Q139 base potential rise \rightarrow Q139 collector potential lowers \rightarrow Q137 base potential lowers \rightarrow Q137 collector potential rises \rightarrow Q144 emitter potential rises \rightarrow to over - drive.
- H. Pulse < At IB2 peak (over - drive)
Q141 cut off \rightarrow Q139 base potential lowers \rightarrow Q139 collector potential rises \rightarrow Q137 base potential rises \rightarrow Q137 collector potential lowers \rightarrow Q144 emitter potential lowers \rightarrow to under - drive.
Feed Back is conducted as above.

3-9-5. H-SIZE FEED BACK SECTION

H. O. T. secondary side H. Pulse is peak rectified at D124 to convert it to H. SIZE detection output. Q113 is a variable current source, and works to get the same detection output even when f_H is different at the same pulse height. This output is returned to IC106 (2/2), compared with input and the error difference is controlled.

3-9-6. HD OUTPUT SECTION AND H. STOP PROTECTOR SECTION

AFC HD clamps H. O. T. secondary side H. Pulse at C144, D113, re-shapes the wave at Q118, passes pulse through Q116, 117 and outputs from E-1 connector pin ⑨. HD output from Q116, 117 emitter is input to IC101 pin ⑪. As long as HD is input to IC101 pin ⑪, pin ⑩ is High. Therefore, Q115 is ON and H. STOP line is normally Low. If HD is not input, IC101 pin ⑩ becomes Low and Q115 turns OFF and as a result, H. STOP line becomes High and set power turns OFF.

Other protectors are H-SIZE MAX/MIN protector and 100V line LOT circuit over current protector.

IC114 detects H-SIZE MAX/MIN.

When H-SIZE becomes too large, IC114 pin ① becomes Low.

When H-SIZE becomes too small, IC114 pin ⑦ becomes Low.

This output passes D139 and connects to IC101 pin ⑬. When pin ⑬ becomes Low, IC101 pin ⑩ becomes Low and protector actuates.

L. O. T. circuit over current protector detects current at R221. When there is over-current, first Q120 turns ON and then, Q121.

Q121 collector is connected to IC114 pin ①, ⑦ line, and protector actuates as above.

3-10. CIRCUIT BOARDS EB (R, G, AND B)

This board has the magnet focus output circuit.

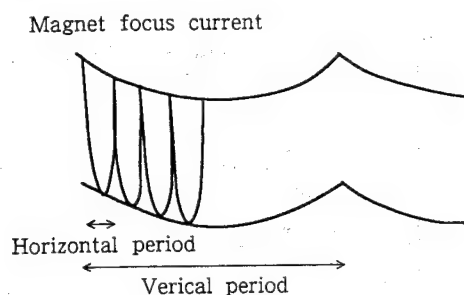
Here is an explanation of how this circuit works.

This circuit is a fixed current amplifier for the current that flows through the magnet focus coils in response to the magnet focus MF (V) and MF (H) signals.

The magnet focus MF (V) (V. PARA and DC component) and MF (H) (H. Para) signals have the DC bias voltage divided by R28 and R29 added at the operational amplifier (IC3 (2/2)).

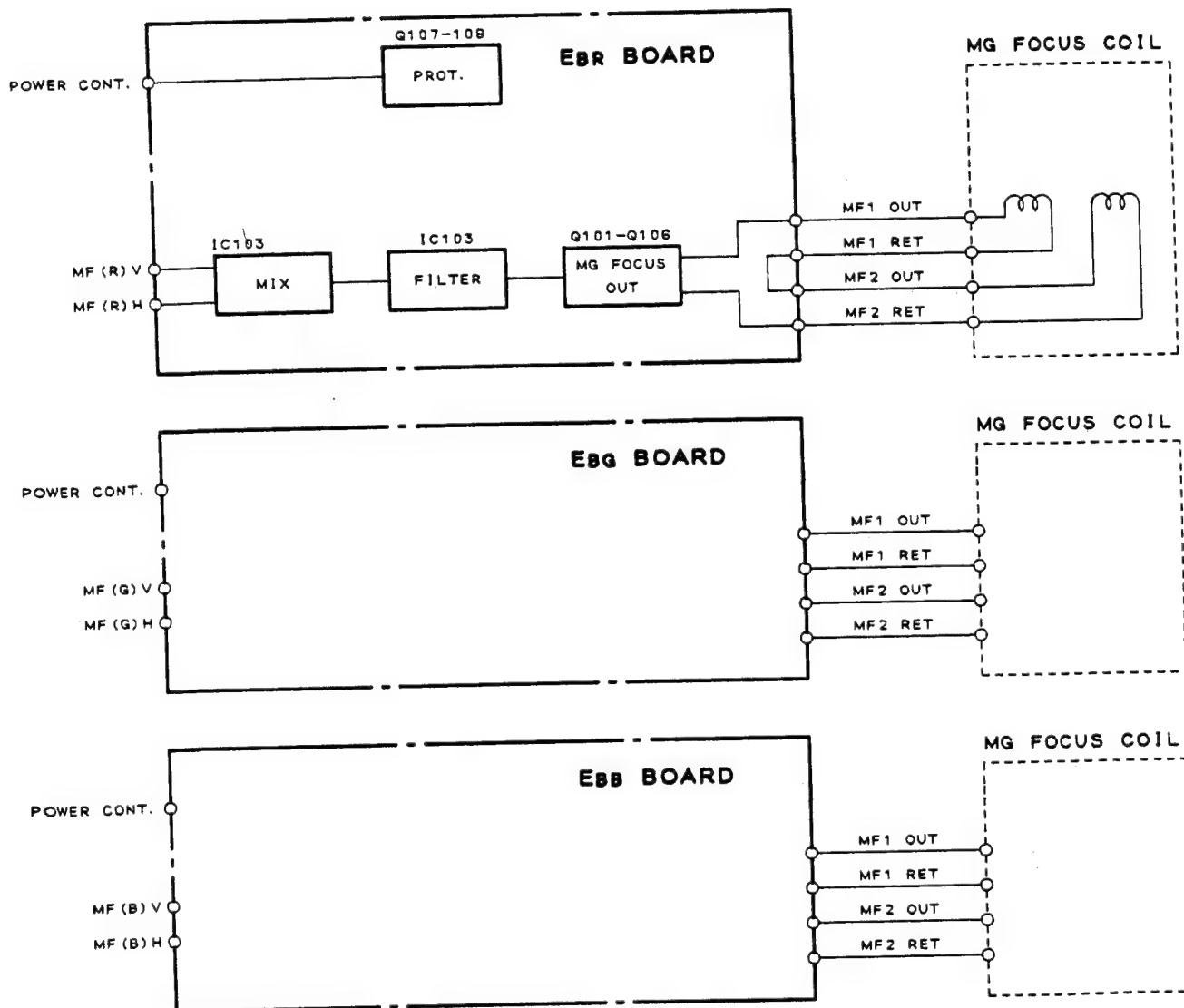
Next, the signals go through the filter made up of IC3 (1/2), R6 - 11, and C7 - 9. This filter has been put together with a characteristic opposite to that of the f characteristic of the magnet focus coils in order to cancel that f characteristic. After passing through this filter, the signals are input to one side (the base of Q1) of the differential amplifier made up of Q1 and Q2. From the collector of Q1, the signals go to the base of Q4 in the drive stage and are amplified as the load on fixed current source Q3. Finally, they pass through the complementary buffer made up of Q5 and Q6 and flow into the magnet focus coils.

The magnet focus coils are two coils connected in series. Dynamic focus is applied by passing direct current and vertical period and horizontal period parabolic currents through the coils.



The current flowing through the magnet focus coils is detected by R16 and returned to the other side (the base of Q2) of the differential amplifier. R25 and R26 protect against overcurrent and determine the bias. C15 is inserted between the collector and base of Q4 in the drive stage to protect against oscillation due to slight drops in the f characteristic. R23, C16, R24 and C17 make up a filter for the ± 35 V lines. If the voltage of the +12 V line falls, Q8 comes on and if the voltage of the -12 V line rises, Q9 comes on. Either of these transistors coming on triggers the protector to switch off the power for the set.

EB (R, G, and B) Board



3-11. CIRCUIT BOARD L

This board comprises the lens focus drive circuit and the error code display section. Here are explanations of both these functions.

3-11-1. LENS FOCUS DRIVE CIRCUIT

Special ICs, TA7267BP (ICs 2-4), are used to drive the lens focus. These ICs can drive the motor forward and reverse with a single power supply. The forward, reverse, brake, and stop modes can be selected by the appropriate combination of High and Low signals at control pins IN1 and IN2.

IN1	IN2	OUT1	OUT2	Mode
H	H	L	L	Brake
H	L	H	L	Forward (contraction)
L	H	L	H	Reverse (expansion)
L	L	High Impe		Stop

Limit switches protect the lens drive section.

3-11-2. CODE DISPLAY

Data signals D0-7 pass through the IC6 (TC74HC541P) buffer, are decoded by ICs 7 and 8 (MC1449P1), and are displayed on 2 digits of 7-segment LEDs. The codes displayed are the protector codes, RS422 communication error codes, data saving codes, and self-check codes.

• Message code list

Here is a list of the codes displayed on the two digits of 7-segment LEDs on this board. Whenever any of these codes is displayed, the LEDs on the Y board light up as well.

1) Protector codes

Whenever any of the protectors is triggered, the appropriate one of the following codes is displayed, and the power is shut off automatically.

CODE	FAN stop	H-stop	IK-over	V-stop	HV-over	power- down
01...	*	-	-	-	-	-
02...	-	*	-	-	-	-
03...	*	*	-	-	-	-
04...	-	-	*	-	-	-
05...	*	-	*	-	-	-
06...	-	*	*	-	-	-
07...	*	*	*	-	-	-
08...	-	-	-	*	-	-
09...	*	-	-	*	-	-
0A...	-	*	-	*	-	-
0b...	*	*	-	*	-	-
0C...	-	-	*	*	-	-
0d...	*	-	*	*	-	-
0E...	-	*	*	*	-	-
0_...	*	*	*	*	-	-
10...	-	-	-	-	-	-
11...	*	-	-	-	*	-
12...	-	*	-	-	*	-
13...	*	*	-	-	*	-
14...	-	-	*	-	*	-
15...	*	-	*	-	*	-
16...	-	*	*	-	*	-
17...	*	*	*	-	*	-
18...	-	-	-	*	*	-
19...	*	-	-	*	*	-
1A...	-	*	-	*	*	-
1b...	*	*	-	*	*	-
1C...	-	-	*	*	*	-
1d...	*	-	*	*	*	-
1E...	-	*	*	*	*	-
1_...	*	*	*	*	*	-
20...	-	-	-	-	*	*

- When one of the above codes is displayed, the immediately preceding adjustment data is lost.
- When the system is restored by switching the main power off, then on again or by switching the power off, then on with the commander, the code display goes out.

2) RS422 communication error codes

A0 Receive time out error (The time between bytes of the receiving data was too long.)

A1 Handshake error (There was an error in the handshake exchange with the master.)

A2 - AE

bit1 Overrun error (The next data came before the data before it was read.)

bit2 Parity error (An error was found in the odd/even parity bit.)

bit3 Framing error (No stop bit was detected.)

- Error code display has no effect on normal software.
- When the next communication is carried out normally, the error code display goes out.

3) Data saving code

These codes are displayed during block copying of data to the backup memory (EEPROM).

C0 EEPROM initialization (all data initialized)

C1 factory shipping data set (All the adjustment data at this point in time is registered as the factory shipping data.)

C2 User memory reset (Returns all the adjustment data to the factory shipment data settings.)

C3 Data saving when the memory key was pressed or the power switched off (Necessary items are saved into nonvolatile memory.)

- During display of any of the above codes, normal operations do not work.
- These codes go out at the completion of block transfer. (This takes about one minute at the most.)
- If one of these codes stays on for more than two minutes, either there has been a tape save error or a breakdown.

4) Self - check code

These codes show that the self - diagnostics program is being executed. (The self - diagnostics program is executed primarily when the power is switched on).

E0 trap error (The program was not executed normally because of a momentary power failure or other reason.)

E1 RAM check

E2 ROM check

E3 EEPROM check

E4 PIO check

- When E0 is displayed, the immediately preceding adjustment data may not have been saved, so check it.

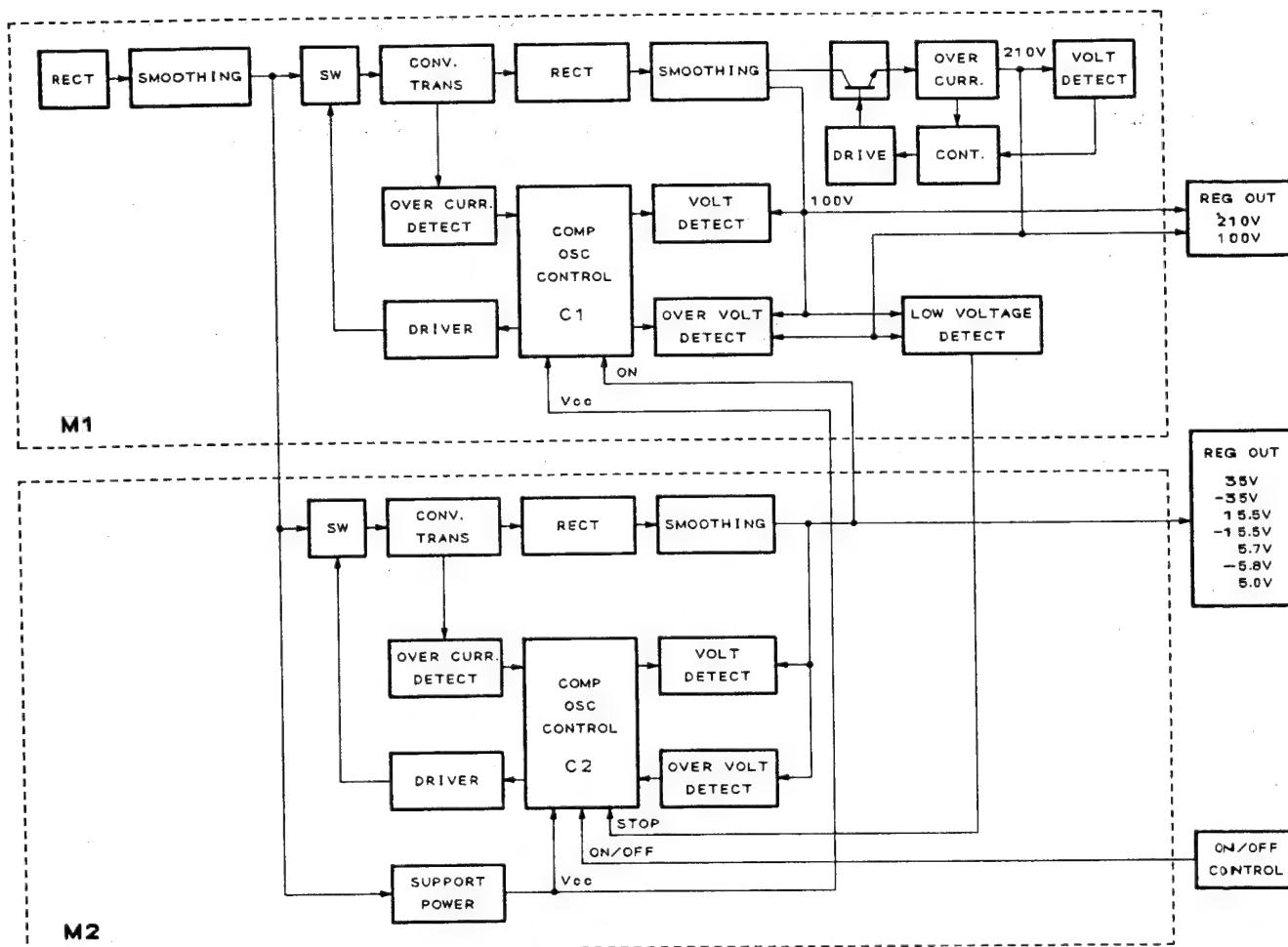
However, operations during display of this code are normal.

- Except for E0, these codes are displayed only briefly (until the completion of the check) and go out when the check finds the system normal. If the system is found to be abnormal, the self - check code display continues. In this case, the only function that works is the power off function.
- When the E4 code lights up, the LED on the Y board blinks. (Pressing SW - 2 at this time resets the st - memory.)

3-11-3. INTERNAL TIMER

This system has a special RGB timer for showing the CRT usage time. This timer works in units of 1000H and displays up to 10,000 hours.

3-12. CIRCUIT BOARD SOPS-1008



This power supply comprises two half bridge converters and one self-exciting flyback converter (auxiliary power supply). When the main power switch is switched on, the auxiliary power supply works first, supplying voltage to the C1 and C2 boards on the M1 board, and the control IC (IC51) operates. At this point in time, the power supply does not operate, the ON signal (about 5V) from the outside is input, and the M2 board power supply starts to operate. When the M2 board power supply operates and voltage is output, part of it is fed to pin ③ on the C1 board on the M1 board. This serves as the ON signal and the M1 power supply starts to operate.

3-12-1. C2 BOARD (CONTROL BOARD)

Pins ① and ② of IC51 make up an error amp for controlling the output voltage. The 5.7V output is divided across R71, R270, and RV251 and input to pin ①. The 5V voltage fed from pin ⑭ is divided between R62 and R63 and input to pin ② as the standard voltage. Pin ④ controls the dead time. When the signal at this pin is high, the on duty signal is 0. When the ON signal is low (the ON signal is input

through Q251 and Q258), the signal at pin ④ goes high, so the power supply does not operate. The oscillation frequency is determined by pins ⑤ and ⑥. Pins ⑧, ⑨, ⑩ and ⑪ are the IC51 output transistor pins. They drive the main transistors through T153 and T154. Pin ⑫ is an input pin. Pin ⑭ is the standard voltage (5V) output pin. Pins ⑮ and ⑯ make up the error amp for protection against overcurrent. The voltage detected by T152 is rectified by D51, D52, D53, and S54, smoothed by L1 and C53, and input to pin ⑯.

3-12-2. M2 BOARD

C152, C153, C166, C167, Q151, Q152, and T151 make up the half bridge converter. The AC voltage output from T151 is rectified by D251, 252, 253, 254, 255, and 256 and smoothed by L251, 252, 253, 265, 266, 267, 268, and 270. D276, D277, D278, D279, R265, R266, R267, R263, and IC252 comprise the overcurrent protection circuit. When any of these output voltages exceeds the standard voltage, pin ① or pin ⑦ of IC252 goes high, the signal is input to pin ⑨ of IC2, D58 and Q53 come on. Pin ④ of IC5 goes high, and operation stops.

3-12-3. C1 BOARD (CONTROL BOARD)

The C1 board operates the same way as the C2 board.

3-12-4. M1 BOARD

C109, C110, C111, C112, Q101, Q102, Q103, and T101 comprise a half bridge converter. The AC voltage output from T101 is rectified by D201, 202, 203, 204, 205, and 206 and smoothed by C201, 202, 213, 214, 215, and 216. Q204, Q205, R232, R233, Q206, Q207, R234, R235, and R236 comprise an overcurrent protection circuit. For 10V output, when the divided voltage exceeds 5V, Q204 comes on, a high signal is input to pin ⑨ of the C1 board, D58 comes on and Q53 comes on, the signal at pin ④ of IC51 goes high, and operation stops. IC203, R247, R248, R249, R250, and R251 comprise a low-voltage protection circuit.

For 100V output, the voltage divided across R247 and R248 is input to pin ⑥ of IC203 and the standard voltage is formed at pin ⑤.

When the voltage at pin ⑥ drops below that at pin ⑤, a high signal is output from pin ⑦ and input to pin ③, time delayed by C227 and R241, and a high signal is output from pin ①. This signal passes through the M2 board and is transmitted to pin ⑨ of the C2 board, so operations stop. R201, IC201, R217, R218, and RV202 comprise a series regulator. R208, R209, R210, R212, R213, R214, R215, R254, and RV201 comprise an overcurrent protection circuit.

3-13. CIRCUIT BOARD PA AND CIRCUIT BOARD PB

3-13-1. HIGH-VOLTAGE GENERATOR

As this is a wide-range multiscan compatible unit, it is difficult to construct a high-voltage circuit by synchronizing with fH as in previous circuits. Therefore, an asynchronous type high-voltage generator having its own oscillator was devised.

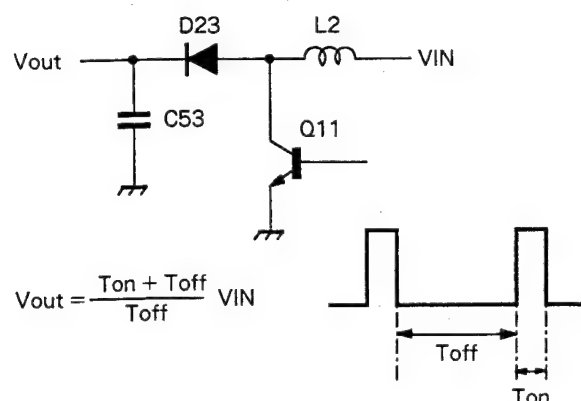
The oscillating element X1 is the oscillator's basic clock and oscillates at approximately 500kHz. This clock is divided by IC7 and IC8, generating a 15.625kHz pulse as its internal oscillator (INT OSC). This pulse is output from pin ⑤ of IC8 and this INT OSC is used as a switching pulse between two circuits, one of which is sent through buffer Q3 and used in the high-voltage generator circuit. The other passes through buffer Q4 and connector PA-3 on PA board and becomes the switching pulse for the negative power supply for board E. The pulse passes through buffer Q3 and connector PA-7 on PA board and added to Q6, the transistor used to drive transformer Q6. The output of this drive transformer (T2) drives FBT's converter transistor (Q10).

Q19 is the power current source for controlling the drive condition of converter transistor (Q10). By fixing its base and by adding the same voltage as +B of FBT to the emitter resistor (R112), it modifies the energy of the primary side of the drive transformer in accordance with the HV load, enabling converter transistor (Q10) to be driven most efficiently. The basic section of the high-voltage circuit is the same as with previous circuits in which Q10 is the converter transistor; D20 and D21, the damper diode; C51, the common condenser; L3 and L4, the dummy L; and C54, an S-shaped condenser. To realize high output to FBTs are connected in parallel. From one of them (FBT 1) the MV for use as the focus voltage is extracted.

As this particular system uses an asynchronous high-voltage method, the high voltage's ripple content can easily affect the screen. For this reason, the high voltage generated by FBT is once passed through a filter (HVF) and then is added to HVB which distributes and detects high voltage. This is then supplied to each CRT.

3-13-2. HV REGULATOR

In a high-voltage regulation method, +B of FBT is controlled (FB pulse level controller) to maintain a constant high-voltage level. The +B that is being controlled is made by stepping up a +100V by a switching regulator circuit. The degree of step up is determined by the duration of switching ON and OFF. When the ON duration is long, the degree of step up is greater and vice versa. The high voltage is reduced by a factor of approximately 4125 by HVB and the output passes through connector PA-7 on PA board and goes into buffer IC1 (μ PC4082, 1/2). This buffer output is further divided by high-voltage adjustment resistors $\Delta R41$ and $\Delta R42$ and is input into the plus side (pin ①) of OP AMP's switching regulator IC6 (μ PC1394). The minus side (pin ④) is supplied with the voltage (approximately 3.0V) of IC9, the standard voltage source. It is through this difference in voltage that the ON-OFF duty of switching pulse (pin ⑦ output) is modified. The output of pin ⑦ passes through buffer Q20 and into the drive converter circuit Q5 and T1. There, the polarity of the pulses are reversed and the switching transistor Q11 driven. Q11 steps up the +100V voltage by switching L2 and regulating with D23 and C53. If the high voltage rises and exceeds the voltage (pin ① of IC6) of the detector side, the ON interval of Q11 shortens and +B is lowered, causing the high voltage to fall. In case the high voltage level falls, a completely opposite operation takes place. As this goes to show, a negative feedback is applied so that the high-voltage detector voltage is always equal to the standard voltage (about 3.0V).



3-13-3. HIGH VOLTAGE PROTECTOR

1) HV Protector

This is a protector to suppress any abnormal rise in HV due to some accident. The HV voltage is divided by the high voltage block (HVB) and by $\Delta R33$, $\Delta R34$ and is input into the plus side of 1/2 of IC2 (μ PC393C). A comparator voltage (approximately 4.8V) generated by zener (RD5.1ESB2) should be input into the minus side. The protector is activated when HV rises and the voltage on the plus side exceeds that of the minus side. It operates by first turning the 1/2 side of IC2 (μ PC393C) ON and the 2/2 side OFF. The oscillation of the HV Regulator is stopped by D8 (ISS119) and Q7 is then turned ON. This causes the oscillation of the converter to be stopped. After dropping HV, D28, Q16 and Q15 are turned ON and the power turned OFF.

2) Σ IK Protector

This protector suppresses any abnormal beam to flow through the CRT. The current of FBT's secondary side is changed to a voltage by R44 to R47, R119, R120 and the protector is activated when this voltage exceeds a certain level. This detecting voltage is divided by R121 and R1 and is input into the base of Q1, which is usually set to the ON position. As the beam current gets larger, the detecting voltage lowers rapidly to the minus side until it reaches a point where Q1 is turned OFF and the protector is activated. The method of operation is the same as (1) HV Protector. The oscillation of the regulator is first stopped, the HV dropped, and finally the unit's power turned off. The unit consists of 2 channels of identical Σ IK Protectors.

3) Low B Protector

This protector is activated when IC5 (μ PC78M12H), an IC that generates Low B (+12V) inside board PA, is destroyed and as a result Low B (+12V) increases. A voltage generated by resistance dividing Low B (+12V) is input into the plus side of IC1 (μ PC4082C) 1/2 while a comparator voltage generated by zener (RD5.1ESB2) should be input into the minus side. The protector is activated when Low B rises and the voltage on the plus side increases.

4) Regulator Protector

This protector protects the element by turning off the oscillation of the regulator when the regulator's voltage becomes abnormally high such as when a high voltage load has been opened. The voltage at the regulator out is divided by R48 to R50, R14, R15 and is input into the plus side of IC3 (μ PC393C) 1/2. A comparator voltage should be input into the minus side. When the voltage at regulator out rises, this operational amplifier is enabled and the protector activated.

3-13-4. INTERNAL PROTECTOR

The circuit is designed so that when certain abnormal modes (for example, when deflection is disabled) are encountered the power is immediately cut off to avoid secondary disasters within the unit. Among the devices, H STOP (horizontal deflection disabled), V STOP (vertical deflection disabled), and FAN PROT (fan protector) all have their power - cut unit centralized on board PA. H STOP and V STOP send their output to the respective open collector and an OR operation is performed with D24 and D25. During abnormal conditions, Q16, Q15 turn ON and brings the "POWER CONT" line to low, thereby cutting off the power. Since the polarity of the "FAN PROT" signal is the opposite of H STOP and V STOP with normal ON generating output, the signal is reversed by Q17 and input into Q15.

3-14. CIRCUIT BOARD QHD

This board comprises input switching GBR/YPbPr switching, YPbPr signal processing, GBR aperture control and sync interface circuits. Here are exalanations of how these cirduits operate.

3-14-1. INPUT SWITCHING

The G/Y, B/Pb, and R/Pr video signals input to the A channel and the B channel are selected with the IC101, IC201, and IC301 Ach/Bch switches. The HD/C. Sync and VD synchronization signals are selected with the IC401 Ach/Bch switch.

3-14-2. YPbPr CONVERSION MATRIX CIRCUIT

The video signals that have passed through the Ach/Bch switch enter the GBR/YPbPr switch directly for BGR input or through the YPbPr processing circuit for YPbPr input. Here are the equations by which YPbPr signals are converted into GBR signals.

$$\begin{pmatrix} G \\ B \\ R \end{pmatrix} = \begin{pmatrix} 1 & -0.226 & -0.477 \\ 1 & 1.826 & 0 \\ 1 & 0 & 1.576 \end{pmatrix} \begin{pmatrix} Y \\ P_B \\ P_R \end{pmatrix}$$

Video signals are added to carry out conversion according to these equations. From the above equations,

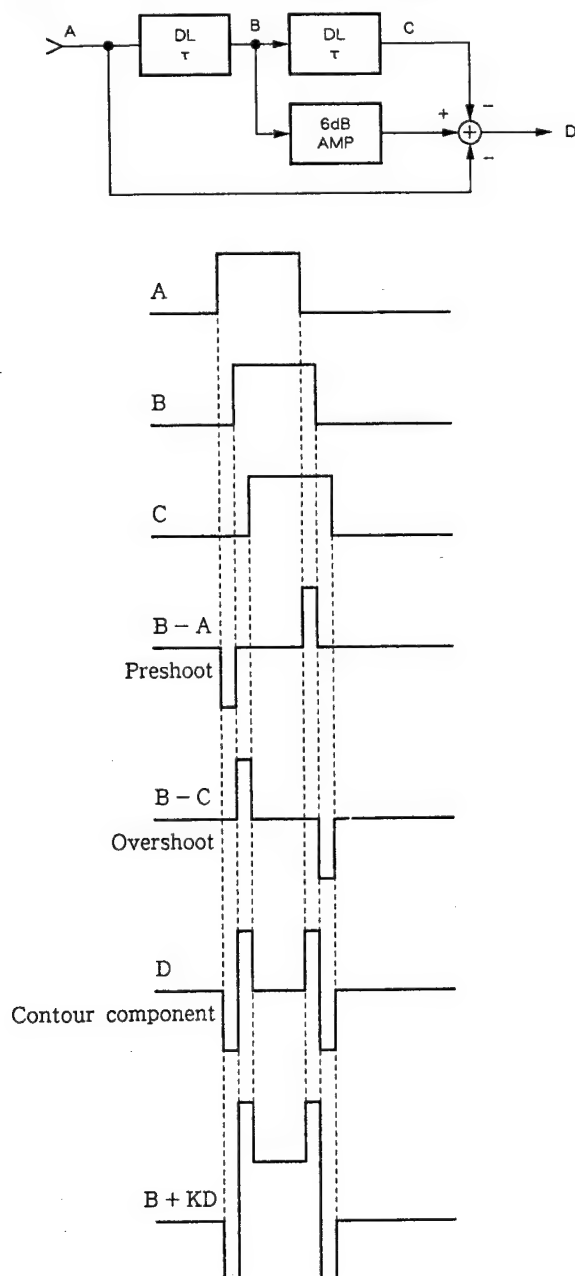
$$G - Y = - (0.226P_B + 0.4777P_R),$$

so first Q170 - 173 are an inversion addition circuit that add P_B and P_R and invert the result to create the $G - Y$ signal. Q103 and Q104 add the Y signal to this $G - Y$ signal to create the G signal.

The B signal is made by adding Y and P_B with Q203 and Q204 and the R signal is made by adding Y and P_R with Q303 and Q304.

3-14.3. APERTURE CONTROL CIRCUIT

This circuit applies preshoot and overshoot to the contour to emphasize the contour. This is done by using delay lines and adding and subtracting the delayed signals to create the contour component and adding this to the signal. The figure below shows the basic principles. A is the original signal and B is the same signal delayed τ . C is B delayed a further τ . If the B signal is used as the standard, then the preshoot is made by subtraction A from B and the overshoot is made by subtracting C from B. Combining these two gives the contour component $2B - (A + C)$. If the size of this contour component is controlled and added to the B signal, the signal has a correction contour. That is the basic idea for aperture control.



Let us find the frequency response of this aperture control circuit. Suppose a sine wave ($E \sin 2\pi f t$) is input.

$$D = -E \sin 2\pi f t + 2E \sin 2\pi f (t - \tau) - E \sin 2\pi f (t - 2\tau) \\ = 2E(1 - \cos 2\pi f \tau) \sin 2\pi f (t - \tau)$$

Thus, the output is a sine wave delayed τ compared to the input and with a gain of $2E(1 - \cos 2\pi f \tau)$. Since the frequency with the maximum gain is:

$$\cos 2\pi f \tau = -1,$$

$$f = \frac{1}{2\tau}$$

Since a delay line with $\tau = 30$ ns is used, this aperture control circuit has a maximum frequency of 16.7 MHz. The QHD board aperture control circuit corrects the contour for the G, B, and R signals. The Y signal is made from the RGB signals, the contour component is made for that Y signal, the gain of this contour component is controlled and it is added to the G, B, and R signals. By connecting the R, G, and B signals to the Q30 adder through a resistor matrix, the Y signal is produced with the formula:

$$Y = 0.701G + 0.087B + 0.212R$$

This Y signal passes through the Q31 and Q32 emitter-follower circuit and becomes the A signal discussed above. The signal passes through the Q33 emitter follower circuit, is delayed 30 ns by DL1, and passed through the Q34 and Q35 emitter follower circuit to become the B signal. Then this signal is delayed 30 ns by DL2 and passed through the Q36 emitter follower circuit to become the C signal. The A, B, and C signals are added and subtracted by Q37 and the result is output as the Q37 collector current. The gain of this current output is controlled by changing the voltage difference between the bases of Q38 and Q39 with control voltage (sharpness).

Then it is amplified by Q40, passes through the Q41 emitter follower circuit and is output. This output is added to the R, G, and B signals at amplifiers Q107, Q207, and Q307. In B & W mode, the B & W signals are also taken from the emitter of Q35 of this circuit, but since there is somewhat of a delay, the signals are delayed that amount by DL3 and input to COL/B & W switches IC103, IC203, and IC303.

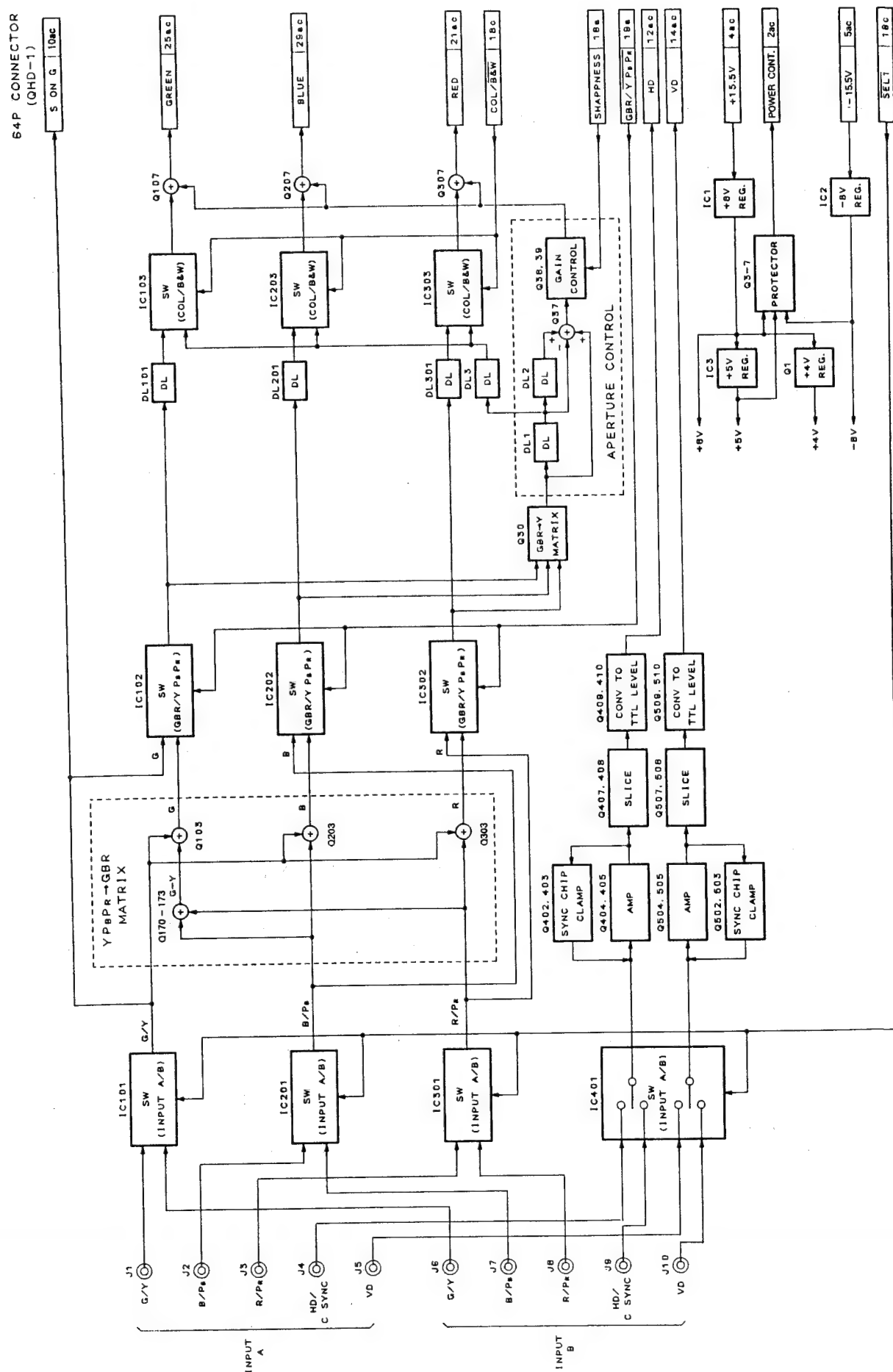
On the other hand, the G, B, and R signals pass through delay lines DL101, 201, and 301, which have the same delay as DL1 and DL3 combined and are input to the COL/B & W switch. The output from this switch and the gain controlled contour component discussed above are input to the emitters of Q107, Q207, and Q307, whose bases are grounded, where the sets of signals are mixed and amplified.

These mixed signals pass through the Q108, Q208, and Q308 emitter - follower circuits and through the Q109 and 110, Q209 and 210, and Q309 and 310 complementary circuits and are output.

3-14-4. SYNC INTERFACE CIRCUIT

The HD/C - Sync signal that has passed through the IC401 Ach/Bch switch passes through the Q401 emitter follower circuit and is amplified by Q404 and Q405. The bottom portion of this signal is clamped by the feedback clamp circuit comprising Q402 and Q403. The result is sliced with a voltage with a division ratio of $(R411 + R412) / (R410 + R411 + R412)$ converted to 5 Vp - p TTL level by the Q409 amp, passed through the Q410 emitter - follower circuit, and output. The VD signal passes through the circuit comprising Q501 - 510 in the same manner and is output.

QHD Board Block Diagram



3-15. CIRCUIT BOARD Y

3-15-1. POWER SUPPLY BLOCK (PS1, PS2, D1, D2)

PS1 and PS2 serve as a power cutting fuse when a voltage overload occurs within board Y. In addition, D1 and D2 convert the voltage from +5.7V (-5.7V) to +5.0V (-5.0V). When pressing the main power switch of the set, SUB +5V is supplied, and when pressing the power switch of the connector, $\pm 5.7V$ is supplied.

3-15-2. CPU BLOCK

1) CPU (IC1)

A Z80 series 8-bit CPU with SIO, TIMER and other supporting ICs integrated into a single chip is used.

2) MEMORY (IC2, 3, 4)

This is made up of programmable ROM (IC2), a general purpose S-RAM (IC3) for flag and data READ/Writes, and a non-volatile ROM (IC4) used to record adjustment data, etc.

3) BUS BUFFER (IC7, 8)

A hysteresis-type current buffer is used for data transfers to systems external to the Y board (DB and L boards).

4) RS422 (IC24)

An RS422 transmitter/receiver for communications with external computers, automatic adjustment devices, etc.

5) RESET Circuit (IC5, Q1, 2)

A power-on reset circuit for the CPU and SIRCS DECODE IC. Q1 and 2 operate so that a normal reset occurs during instantaneous drop in power voltage caused by sudden black out, etc.

3-15-3. SIRCS BLOCK

1) SIRCS DECODER (IC9), WAIT CONTROL (IC6)

This IC decodes SIRCS signals to enable the codes to be read by the CPU. The following processes take place from the time the SIRCS signals are received until the codes are read by the CPU:

- * The "CONT" terminal is set to Low when a valid SIRCS code is received.
- * A CPU interrupt occurs and the CPU turns the "CE/OE" signal of IC9 to Low.
- * IC6 (mono-multi) puts the CPU in WAIT state for a few msec.
- * Finally, the data are read into the CPU.

2) POWER CONTROL (Q3, 4, 5)

When IC9 decodes a POWER ON (OFF) code, it unconditionally turns Q3 ON (OFF) and sends (cuts) the current supplied to the "power cont" line, thereby enabling control of the power supply. When the protector is activated, the power supply is cut by externally dropping the "power cont" line to GND. However, it should be noted that in such cases the operation of the protector is detected by Q4 and IC9 is reset by Q5.

3-15-4. I/O PORT BLOCK

1) ADDRESS DECODER, PARALLEL I/O PORT, INTERRUPT CONTROL (IC10, 28)

IC10 is a dedicated gate array with the above functions and is a PORT that is used to READ ch-select and other control/input signal information. Additionally, it receives the control line for each protector and is also equipped with such functions as generating a CPU interrupt while it is in operation.

2) DIP SW (SW1, 2)

SW1 is a special switch used for mode adjustments at the factory; normally all bits (SW1-1 to 4) must be set to ON.

When SW2 is pressed, all adjustment data defaults to the factory setting.

3-15-5. FH/FV DETECT BLOCK (IC12)

The present deflection frequency is detected from the VD/HFHD signals supplied by the deflection system and the information is sent to the CPU.

3-15-6. SYNC BLOCK

1) SYNC CONTROL & CLAMP PULSE GENERATOR (IC11)

This is a gate array that generates SYNC pulses for the deflection system and clamp pulses for the signal system. It uses SYNC signals received from the Signal Board (H/C-sync, V-sync, Sync on Green) for its input. It features:

- * Detection of input SYNC signals (existence or non-existence of each SYNC and its polarity)

- * Selection of SYNC source (H/V-sync, Sync on Green or Composite-sync)
- * Alignment of SYNC polarity (Reversed when H/V-sync has a positive polarity)
- * H/V separation for Composite-sync and Sync on Green
- * Phase control of clamp pulses
- * Width control of clamp pulses
- * Transmission of various function control signals and information through the CPU BUS

- 2) H - SYNC REFORM (IC6)
 Maintains the width of H - sync sent to the deflection system for approximately 2μ sec.
- 3) V - SYNC DETECT (IC26)
 Detects whether V - sync out pulse of IC11 exists or not and sends this information to the CPU. For example, this is done to determine if the signal connected to H/C - SYNC input terminal is composite or not.

3-15-7. CHARACTER GENERATOR/INTERNAL SIGNAL GENERATOR BLOCK

- 1) CHARACTER GEN. INT - SG (IC13, 14, 15, 16, 17)
 Whenever an input exists, a clock synchronized to "HFHD" and "VD" are used to generate each test pattern and character. When input does not exist, the H and V - sync pulses, test patterns, and characters are created by a crystal - oscillated clock. (IC13)
 IC14 is a high - speed S - RAM to record the position and color of the screen characters, while IC15 to 17 are mask ROMs to record character font data.
- 2) TTL to ECL CONVERTER (IC18, 19)
 Because INT SG, character R/G/B, and BOARDER (shadow of characters) signals contain high - frequency contents, they are converted to ECL before being sent to the signal system board.
- 3) PLL (IC20, 21, 22, 23, 25, Q6)
 Characters and internal signals are generated by synchronizing them with the incoming signals (HFHD and VD to be precise) with the use of a PLL circuit. The output from the phase comparator system (IC20) passes through an active filter composed of C44, R94, 95, and IC20 are then fed into a VCO (IC21). The output from VCO first goes into IC13 "CKIN" and then passes through a $1/417$ pre - scaler equipped within IC13. Finally, the output is returned to the phase comparator. Since a single VCO imposes a limit on the frequency range that can be locked, 2 VCO units (IC21 is actually composed of 2 VCO units) are used: one for high - band use and the other for low - band use. The VCOs are switched by IC22's voltage converter and the flip - flop of IC23.
 Furthermore, to improve the stability during locked conditions, Q6 and IC25 are used to control the polarity of the correcting waveform of IC20's pin ③.
- 4) VD SYNCHRONIZE (IC26, 27)
 When VD and HFHD are in a certain phase relation, IC13's internal counter deviates by 1 count and may cause V - jitter of the characters. For this reason, the phase of VD is shifted to a stable position.

SECTION 4

SET-UP ADJUSTMENTS

Note for adjustments

For set-up adjustments, circuit adjustments, and CRT replacement, adjust with the direction yoke stuck attached the CRT.

ADJUSTMENTS WHEN REPLACING A CRT

4-1. NECK ASSEMBLY SETTING

※ After replacing the CRT, always position the neck assembly in the manner described below before carrying out any adjustments.

1. Attach the main deflection yoke, sub-deflection yoke, and magnet focus coil to the funnel section of the CRT.
2. Set the installation fixture for the 2-pole and 4-pole magnets in the center of G1 as shown in Fig. 2.

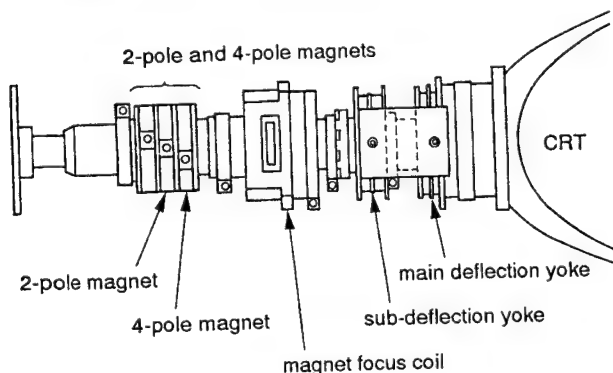
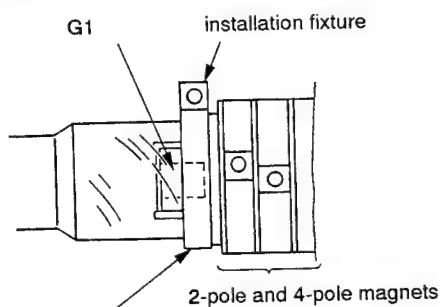


Fig. 1

※ Setting the 2-pole and 4-pole magnets.



Set so that the 2-pole and 4-pole magnet installation fixture comes to the center of G1.
Note: Be careful when installing the installation fixture. If it is tightened too much, it will break the neck section. (Only tighten to the point where the fixture starts to be deformed.)

Fig. 2

4-2. MAIN DEFLECTION YOKE ADJUSTMENT

※ Carry out the main deflection yoke adjustment in the order green, red, blue.

1. After turning off the switch on Y board (SW1-1), turn on MAIN POWER switch and POWER switch on the set.
2. Press the **[SKEW]** key to put the system into skew adjustment mode.

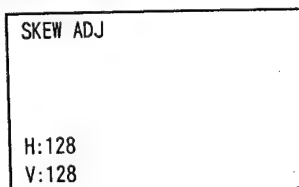


Fig. 3

3. Adjust with the (**[◀]**, **[▶]**, **[▲]** and **[▼]**) arrow keys so that H=128 and V=128. (Fig. 3)
4. Press the **[TEST]** key to display the cross-hair pattern.
5. Turn the main deflection yoke to adjust the screen tilt. (Fig. 4)

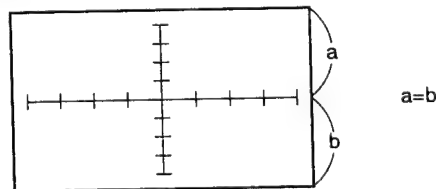


Fig. 4

6. After adjustment, fasten the main deflection yoke.
7. After all the adjustments have done, turn off POWER switch on the remote commander and off MAIN POWER switch.
Turn on the switch on Y board (SW1-1) after confirming STAND-BY indicator goes off.

4-3. SUB-DEFLECTION YOKE ADJUSTMENT

※ Carry out the sub-deflection yoke adjustment in the order green, red, blue.

1. Press the remote commander REGISTRATION **[LIN]** key, then press the **[TEST]** key to display the cross-hair pattern.
2. Adjust the sub-deflection yoke so that when the (**[◀]** and **[▶]**) arrow keys are varied from their maximum to their minimum settings, the center horizontal line is not distorted. (Fig. 5)

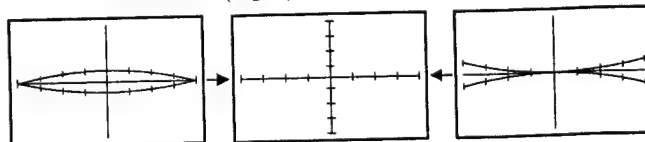


Fig. 5

Note: If the sub-deflection yoke is not completely adjusted, the type of distortion shown in the figure above will be seen when the H: data is greatly changed.

3. After adjustment, fasten the sub-deflectin yoke.

4-4. MAGNET FOCUS COIL ADJUSTMENT

※ Carry out the magnet focus coil adjustment in the order green, red, blue.

1. Press the remote commander FOCUS **[MG]** key to put the system into magnet focus adjustment mode.
2. Select the color to be adjusted with the ADJ **[R]**, **[G]**, and **[B]** keys.

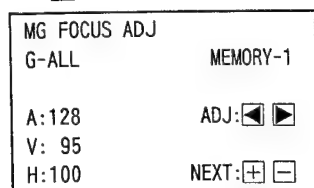


Fig. 6

3. Use the (**[◀]** and **[▶]**) arrow keys to set the A: data to 128. (Fig. 6)

A: The adjusted data of the center focus.

V: The adjusted data of the upper and the bottom focus.

H: The adjust data of the right and left focus.

4. Move the magnet focus coil forward and back to adjust the focus at the center of the screen. (Fig. 7)

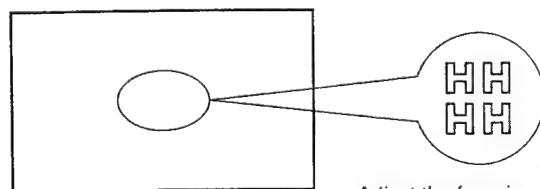


Fig. 7

Adjust the focusing at H-pattern.

5. After adjustment, fasten the magnet focus coil.

4-5. 2-POLE AND 4-POLE MAGNET ADJUSTMENT

※ Carry out the 2-pole and 4-pole magnet adjustment in the order green, red, blue.

1. Double check that the installation fixture for the 2-pole and 4-pole magnets is at the center of G1, then fasten it.
2. Press the INPUT SELECT **[VIDEO]** key, then press the PICTURE CONTROL **[RESET]** key.
3. Adjust the contrast to maximum with the CONTR +/- keys.
4. Press the remote commander FOCUS **[MG]** key, then press the **[TEST]** key and select the dot pattern.
5. Press the (**[◀]**) arrow key and adjust to make the dot shape easy to see (defocus).
6. Adjust the 4-pole magnet to make the dots perfectly circular. (Fig. 8)

7. Press the (**[▶]**) arrow key and adjust to make the core of the dot easy to see (under focus).
8. Adjust the 2-pole magnet so that the core of the dot is at the center of the halation. (Fig. 9)
9. Repeat 5) – 8) and adjust while securing the tracking.

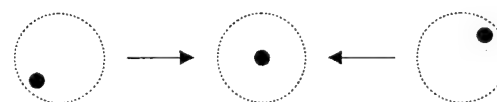
• 4-pole magnet adjustment



Adjust to make the dot perfectly circular.

Fig. 8

• 2-pole magnet adjustment



Adjust so that the dot core is at the center.

Fig. 9

10. Press the (**[◀]** and **[▶]**) arrow keys to focus the center of the screen.
11. After adjustment, fasten the 2-pole and 4-pole magnets.

4-6. GREEN FOCUS ADJUSTMENT

1. Press the remote commander FOCUS **[LENS]** key to put the system into lens focus adjustment mode.
2. Press the ADJ **[G]** key to select green.

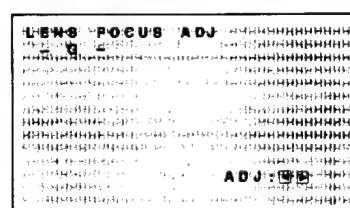


Fig. 10

3. Press the (**[◀]** and **[▶]**) arrow keys to focus the center of the screen.
4. Press the remote commander FOCUS **[MG]** key to put the system into magnet focus adjustment mode.
5. Press the PICTURE CONTROL **[RESET]** key, then set the following data with the CONTR +/- and BRT +/- keys.

- CONTR: 80
- BRT: 50

6. Press the INPUT SELECT **[A]** key.

MG FOCUS ADJ	
G-ALL	MEORY-1
A:128	ADJ: [◀] [▶]
V: 95	
H:100	NEXT: [+] [-]

A: The adjusted data of the center focus.
V: The adjusted data of the upper and the bottom focus.
H: The adjusted data of the right and left focus.

Fig. 11

- Press the (**[◀]** and **[▶]**) arrow keys to focus the center of the screen.
- Press the POSITION + key to put the system into upper and bottom focus adjustment mode. (V:)
- Press the (**[◀]** and **[▶]**) arrow keys to focus the screen upper and bottom.
- Press the POSITION + key to put the system into right and left focus adjustment mode.
- Press the (**[◀]** and **[▶]**) arrow keys to focus the screen right and left.
- Press the **[TEST]** key and hold it for at least 5 seconds to select the HD monoscope pattern.
- Press the (**[◀]** and **[▶]**) arrow keys to focus the HD monoscope pattern.

4-7. RED FOCUS ADJUSTMENT

- Press the ADJ **[R]** key to select red.
- Adjust the red focus with the procedure given in 3 – 13 for the green focus adjustment.

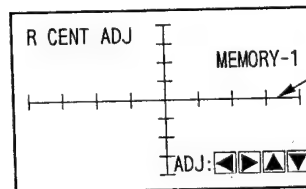
4-8. BLUE FOCUS ADJUSTMENT

- Press the ADJ **[B]** key to select blue.
- Adjust the blue focus with the procedure given in 3 – 13 for the green focus adjustment.
- When the green, red, and blue focus adjustments are complete, press the **[MEMORY]** key. (Just press it; do not hold it down.)

4-9. CENTERING ADJUSTMENT

- Press the remote commander CENT **[R]** key to put the system into red centering adjustment mode.
- Press the CUT OFF **[B]** key to cut off the blue.

3. Press the (**[◀]**, **[▶]**, **[▲]**, and **[▼]**) arrow keys to adjust the red line to overlay the center of the green.



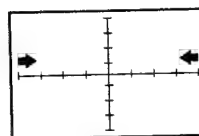
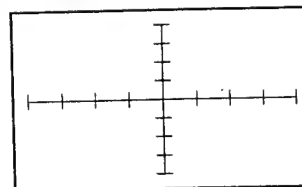
Align the red with the center of the green. (When the red and green are overlaid, the line turns yellow.)

Fig. 12

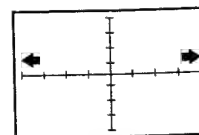
- Press the remote commander CENT **[B]** key to put the system into blue centering adjustment mode.
- Press the CUT OFF **[G]** key to cut off the green.
- Press the (**[◀]**, **[▶]**, **[▲]**, and **[▼]**) arrow keys to adjust the blue line to overlay the center of the red.
- If you can not adequately adjust the centering, put the system into zone adjustment mode and select Zone ① with the POSITION key.

4-10. GREEN PICTURE ADJUSTMENT

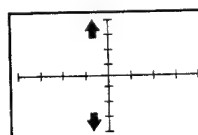
- Size adjustment
 - Press the remote commander **[SIZE]** key to put the system into size adjustment mode.
 - Press the **[TEST]** key to select the cross-hair pattern, then press the ADJ **[G]** key.
 - Press the CUT OFF **[R]** and **[B]** keys to select just green.
 - Press the (**[◀]**, **[▶]**, **[▲]**, and **[▼]**) arrow keys to adjust the picture size.



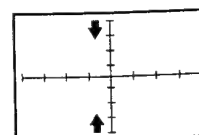
Reduces the width of the picture.



Increases the width of the picture.



Increases the height of the picture.



Reduces the height of the picture.

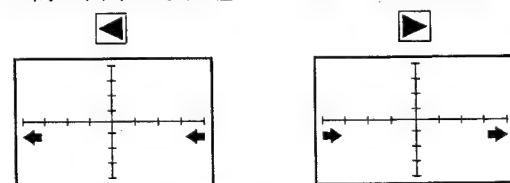
Fig. 13

2.

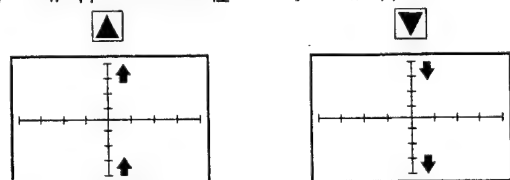
Linearity (LIN) adjustment

- 1) Press the remote commander REGISTRATION
- 2) Press the **TEST** key to select the cross-hair
- 3) Press the CUT OFF **R** and **B** keys to select just
- 4) Press the **▲**, **▼**, **▶**, and **◀** arrow keys to

adjust the left-right and upper-bottom center lines horizontally and vertically, respectively.



The left and right of the screen move to the left without the center of the screen moving.



The upper and bottom of the screen move up without the center of the screen moving.

Fig. 14

3.

Skew adjustment

- 1) Press the remote commander REGISTRATION
- 2) Press the **SKEW** key to put the system into skew adjustment mode.
- 3) Press the **TEST** key to select the cross-hair
- 4) Press the **▲**, **▼**, **▶**, and **◀** arrow keys to

adjust the left-right and upper-bottom center lines to be horizontal and vertical, respectively.

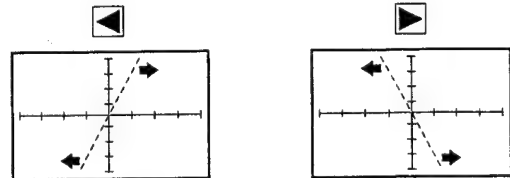


Fig. 15

4.

Bow adjustment

- 1) Press the remote commander REGISTRATION
- 2) Press the **BOW** key to put the system into bow adjustment
- 3) Press the CUT OFF **R** and **B** keys to select just
- 4) Press the **▲**, **▼**, **▶**, and **◀** arrow keys to

adjust the bow distortion of the cross lines.

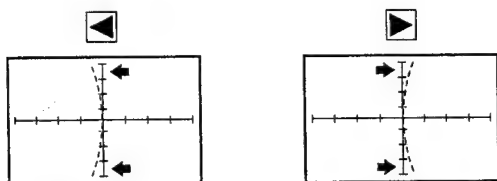


Fig. 16

5.

Keystone adjustment

- 1) Press the remote commander REGISTRATION
- 2) Press the **KEY** key to put the system into keystone
- 3) Press the CUT OFF **R** and **B** keys to select just
- 4) Press the **▲**, **▼**, **▶**, and **◀** arrow keys to

adjust the keystone distortion of the four corners in the horizontal and vertical directions.

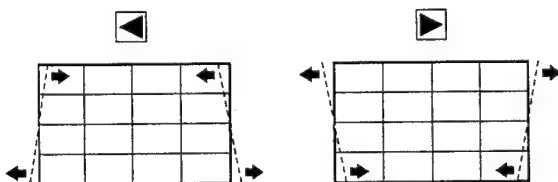


Fig. 17

6. Pincushion (PIN) adjustment

- 1) Press the remote commander REGISTRATION
- 2) Press the **PIN** key to put the system into pincushion
- 3) Press the CUT OFF **R** and **B** keys to select just
- 4) Press the **▲**, **▼**, **▶**, and **◀** arrow keys to

adjust the pincushion distortion of the four corners in the horizontal and vertical directions.

4-11. RED-GREEN REGISTRATION ADJUSTMENT

- 1) Size adjustment
- 2) Press the remote commander REGISTRATION **SIZE** key to put the system into size adjustment mode.
- 3) Press the **TEST** key to select the cross-hair pattern, then press the **ADJ** key.
- 4) Adjust the horizontal size with HWC (LV3) on the E board. When the deflection yoke is replaced, set the RGB SIZE and REGISTRATION H. SIZE data to their maximums, before adjusting HWC.
- 5) Press the (▲) and (▼) arrow keys to adjust the vertical size.

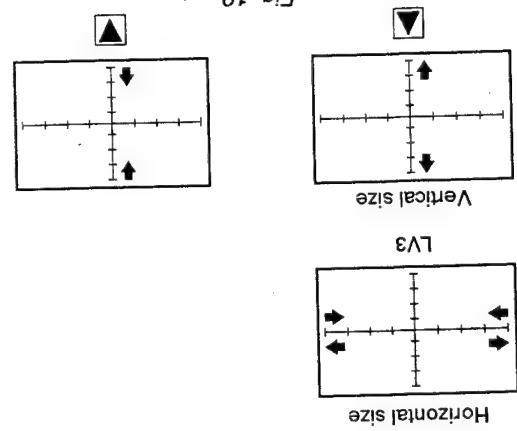


Fig. 19

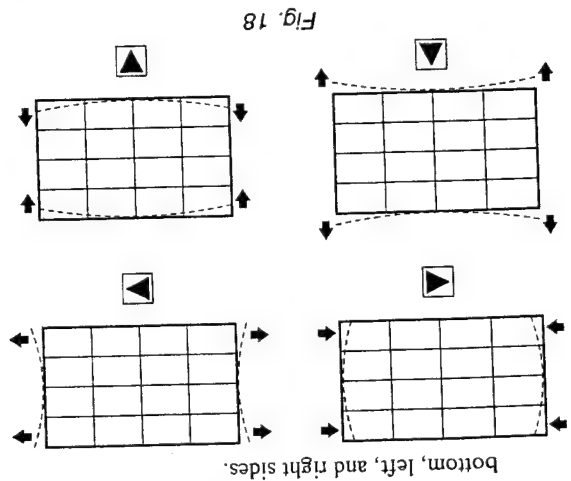


Fig. 18

- 2) Press the **TEST** key to select the cross-hatch pattern, then press the **ADJ** key.
- 3) Press the **CUT OFF** and **B** keys to select just green.
- 4) Press the (▲), (▼), (▶), and (◀) arrow keys to adjust the pincushion distortion for the upper, bottom, left, and right sides.

3. Skew adjustment
- 1) Press the **SKEW** key to put the system into skew adjustment mode.
- 2) Press the **TEST** key to select the cross-hair pattern, then press the **ADJ** key.
- 3) Press the **CUT OFF** key to select just red and green.
- 4) Press the (▶), (◀), (▲), and (▼) arrow keys to adjust the red skew so that the red overlays the green cross-hair.

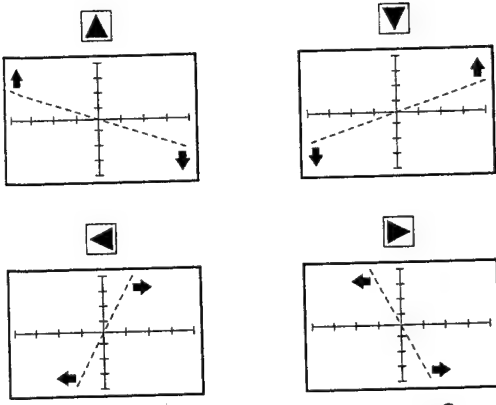


Fig. 20

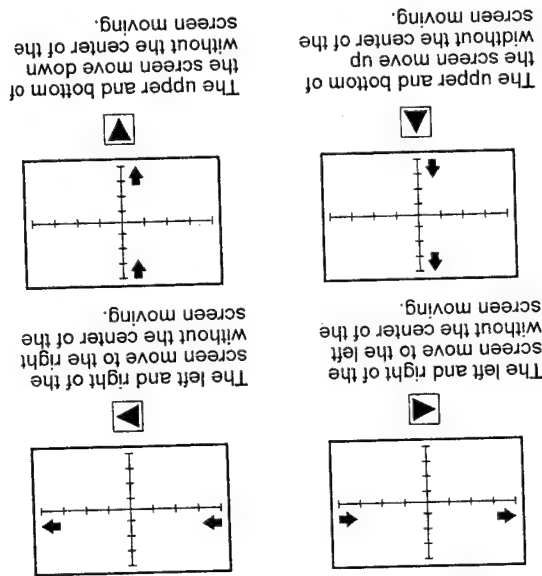
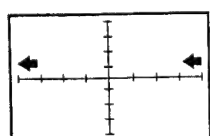


Fig. 21

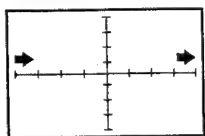
2. Linearity (LIN) adjustment
- 1) Press the remote commander REGISTRATION **LIN** key to put the system into linearity adjustment mode.
- 2) Press the **TEST** key to select the cross-hatch pattern, then press the **ADJ** key.
- 3) Press the **CUT OFF** key to select just red and green.
- 4) Press the (▶), (◀), (▲), and (▼) arrow keys to adjust the red linearity so that it overlays the green cross-hair.

2. Linearity (LIN) adjustment

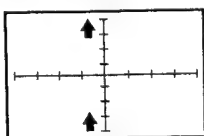
- 1) Press the remote commander REGISTRATION **LIN** key to put the system into linearity adjustment mode.
- 2) Press the **TEST** key to select the cross-hair pattern, then press the ADJ **G** key.
- 3) Press the CUT OFF **R** and **B** keys to select just green.
- 4) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the left-right and upper-bottom center lines horizontally and vertically, respectively.



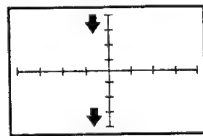
The left and right of the screen move to the left without the center of the screen moving.



The left and right of the screen move to the right without the center of the screen moving.



The upper and bottom of the screen move up without the center of the screen moving.



The upper and bottom of the screen move down without the center of the screen moving.

Fig. 14

3. Skew adjustment

- 1) Press the remote commander REGISTRATION **SKEW** key to put the system into skew adjustment mode.
- 2) Press the **TEST** key to select the cross-hair pattern, then press the ADJ **G** key.
- 3) Press the CUT OFF **R** and **B** keys to select just green.
- 4) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the left-right and upper-bottom center lines to be horizontal and vertical, respectively.

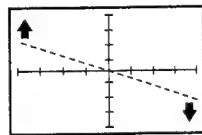
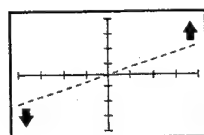
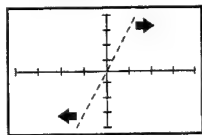
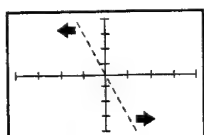


Fig. 15

4. Bow adjustment

- 1) Press the remote commander REGISTRATION **BOW** key to put the system into bow adjustment mode.
- 2) Press the **TEST** key to select the cross-hair pattern, then press the ADJ **G** key.
- 3) Press the CUT OFF **R** and **B** keys to select just green.
- 4) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the bow distortion of the cross lines.

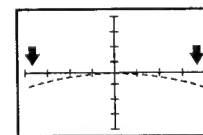
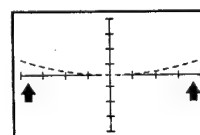
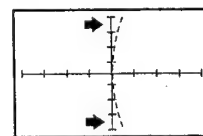
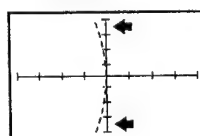


Fig. 16

5. Keystone adjustment

- 1) Press the remote commander REGISTRATION **KEY** key to put the system into keystone adjustment mode.
- 2) Press the **TEST** key to select the cross-hatch pattern, then press the ADJ **G** key.
- 3) Press the CUT OFF **R** and **B** keys to select just green.
- 4) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the keystone distortion of the four corners in the horizontal and vertical directions.

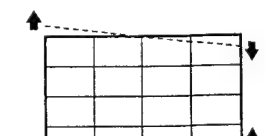
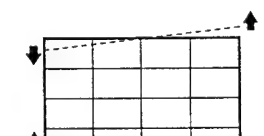
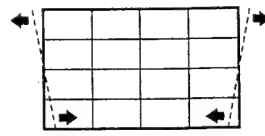
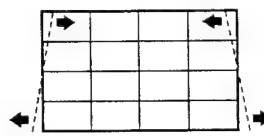


Fig. 17

6. Pincushion (PIN) adjustment

- 1) Press the remote commander REGISTRATION **PIN** key to put the system into pincushion adjustment mode.

- 2) Press the **TEST** key to select the cross-hatch pattern, then press the **ADJ G** key.
- 3) Press the CUT OFF **R** and **B** keys to select just green.
- 4) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the pincushion distortion for the upper, bottom, left, and right sides.

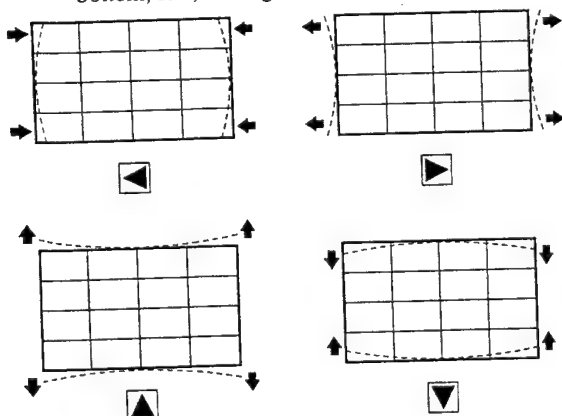


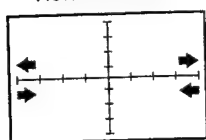
Fig. 18

4-11. RED-GREEN REGISTRATION ADJUSTMENT

1. Size adjustment

- 1) Press the remote commander REGISTRATION **SIZE** key to put the system into size adjustment mode.
- 2) Press the **TEST** key to select the cross-hair pattern, then press the **ADJ R** key.
- 3) Press the CUT OFF **B** key to select just red and green.
- 4) Adjust the horizontal size with HWC (LV3) on the E board. When the deflection yoke is replaced, set the RGB SIZE and REGISTRATION H. SIZE data to their maximums, before adjusting HWC.
- 5) Press the (**▲** and **▼**) arrow keys to adjust the vertical size.

Horizontal size



LV3

Vertical size

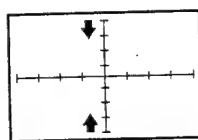
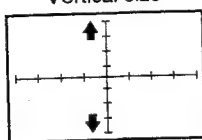
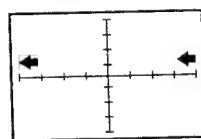


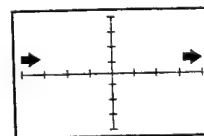
Fig. 19

2. Linearity (LIN) adjustment

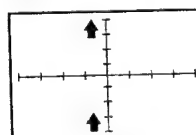
- 1) Press the remote commander REGISTRATION **LIN** key to put the system into linearity adjustment mode.
- 2) Press the **TEST** key to select the cross-hair pattern, then press the **ADJ R** key.
- 3) Press the CUT OFF **B** key to select just red and green.
- 4) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the red linearity so that it overlays the green cross-hair.



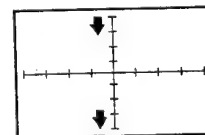
The left and right of the screen move to the left without the center of the screen moving.



The left and right of the screen move to the right without the center of the screen moving.



The upper and bottom of the screen move up without the center of the screen moving.



The upper and bottom of the screen move down without the center of the screen moving.

Fig. 20

3. Skew adjustment

- 1) Press the **SKEW** key to put the system into skew adjustment mode.
- 2) Press the **TEST** key to select the cross-hair pattern, then press the **ADJ R** key.
- 3) Press the CUT OFF **B** key to select just red and green.
- 4) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the red skew so that the red overlays the green cross-hair.

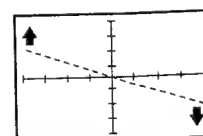
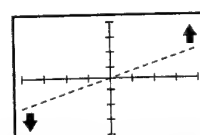
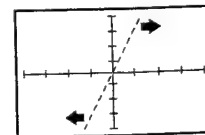
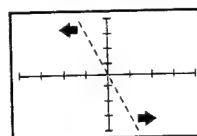


Fig. 21

4. Bow adjustment

- 1) Press the **[BOW]** key to put the system into bow adjustment mode.
- 2) Press the **[TEST]** key to select the cross-hair pattern, then press the **ADJ [R]** key.
- 3) Press the **CUT OFF [B]** key to select just red and green.
- 4) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the red bowing so that the red overlays the green cross-hair.

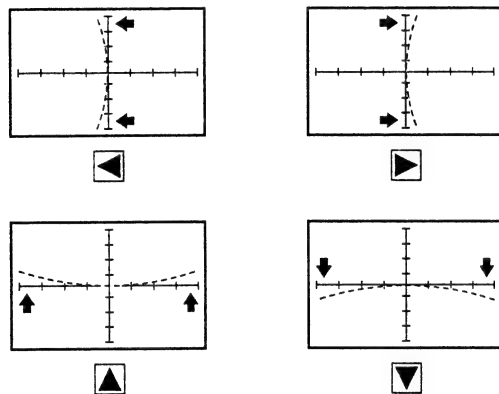


Fig. 22

5. Keystone (KEY) adjustment

- 1) Press the **[KEY]** key to put the system into keystone adjustment mode.
- 2) Press the **[TEST]** key to select the cross-hatch pattern, then press the **ADJ [R]** key.
- 3) Press the **CUT OFF [B]** key to select just red and green.
- 4) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the red keystone distortion so that the red overlays the green cross-hatch.

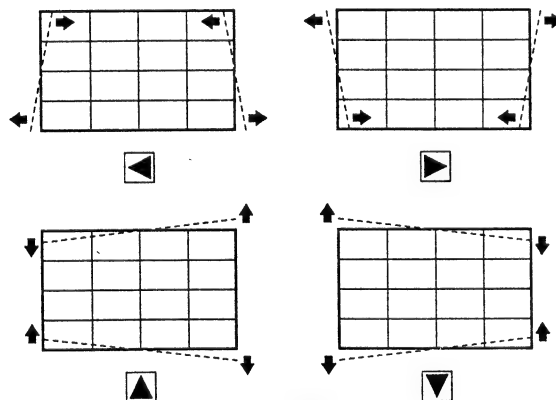


Fig. 23

6. Pincushion (PIN) adjustment

- 1) Press the **[PIN]** key to put the system into pincushion adjustment mode.
- 2) Press the **[TEST]** key to select the cross-hatch pattern, then press the **ADJ [R]** key.

- 3) Press the **CUT OFF [B]** key to select just red and green.
- 4) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the red pincushion distortion so that the red overlays the green cross-hatch.

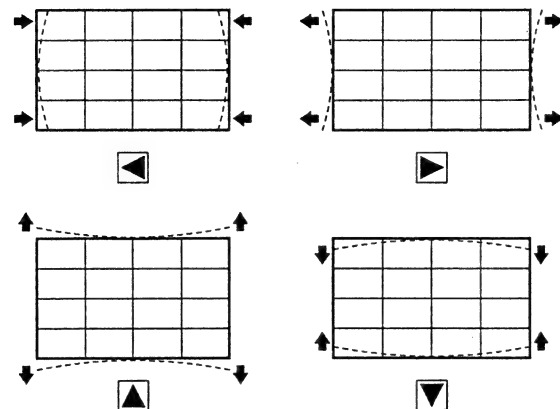
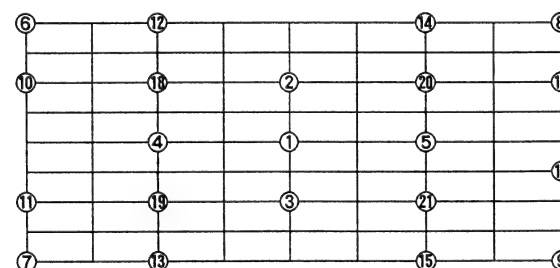


Fig. 24

7. Zone adjustment

- 1) Press the **[ZONE]** key to put the system into zone adjustment mode.
- 2) Press the **[TEST]** key to select the cross-hatch pattern, then press the **ADJ [R]** key.
- 3) Press the **CUT OFF [B]** key to select just red and green.
- 4) Press the **POSITION []** key to put the system into Zone ④ adjustment mode. (Fig. 25)
- 5) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to align the red and green horizontally (**◀** and **▶**) and vertically (**▲** and **▼**).
- 6) In the same manner, adjust Zones ⑤ through ⑩ in order.



Note: Do not adjust Zones ② and ③.

Fig. 25

4-12. BLUE-RED REGISTRATION ADJUSTMENT

1. Size adjustment

- 1) Just as in 1) - 3) for the size adjustment of the red-green registration adjustment, press the **ADJ [B]** key, then press the **CUT OFF [G]** key to select just blue and red.

- 2) Adjust the horizontal size with HWC (LV1) on the E board. When the deflection yoke is replaced, set the RGB SIZE and REGISTRATION H. SIZE data to their maximums, before adjusting HWC.

- 3) Press the (**▲** and **▼**) arrow keys to adjust the vertical size.

2. Linearity (LIN) adjustment

- 1) Just as in 1) - 3) for the linearity adjustment of the red-green registration adjustment, press the **ADJ [B]** key, then press the **CUT OFF [G]** key to select just blue and red.

- 2) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the blue linearity so that it overlays the red cross-hatch.

3. Skew adjustment

- 1) Just as in 1) - 3) for the skew adjustment of the red-green registration adjustment, press the **ADJ [B]** key, then press the **CUT OFF [G]** key to select just blue and red.

- 2) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the blue skew so that the blue overlays the red cross-hatch.

4. Bow adjustment

- 1) Just as in 1) - 3) for the bow adjustment of the red-green registration adjustment, press the **ADJ [B]** key, then press the **CUT OFF [G]** key to select just blue and red.

- 2) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the blue bowing so that the blue overlays the red cross-hatch.

5. Keystone adjustment

- 1) Just as in 1) - 3) for the keystone adjustment of the red-green registration adjustment, press the **ADJ [B]** key, then press the **CUT OFF [G]** key to select just blue and red.

- 2) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the blue keystone distortion so that the blue overlays the red cross-hatch.

6. Pincushion (PIN) adjustment

- 1) Just as in 1) - 3) for the pincushion adjustment of the red-green registration adjustment, press the **ADJ [B]** key, then press the **CUT OFF [G]** key to select just blue and red.

- 2) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to adjust the blue pincushion distortion so that the blue overlays the red cross-hatch.

7. Zone adjustment

- 1) Just as in 1) - 3) for the zone adjustment of the red-green registration adjustment, press the **ADJ [B]** key, then press the **CUT OFF [G]** key to select just blue and red.

- 2) Press the **POSITION []** key to put the system into Zone ④ adjustment mode. (See Fig. 25.)

- 3) Press the (**◀**, **▶**, **▲**, and **▼**) arrow keys to align the blue and red horizontally (**◀** and **▶**) and vertically (**▲** and **▼**).
- 4) In the same manner, adjust Zones ⑤ through ⑩ in order.

4-13. WHITE BALANCE ADJUSTMENT

Preparations

1. Remove the commander blinders.
2. Press the **[TEST]** key and hold it for at least 5 seconds.
3. The screen changes and the serviceman mode display appears.
4. Press the **▲** arrow key. This puts the system into serviceman mode.

1. Blue defocus adjustment

- 1) Press the **FOCUS [MG]** key to put the system into magnet focus adjustment mode.
- 2) Press the **ADJ [B]** key.
- 3) Press the **◀** arrow key to minimize the setting, then press the **▶** key to move in the direction of the point where the image is just focused and adjust for the point where the gaps between the horizontal lines and between the vertical lines can be seen (slightly defocused).

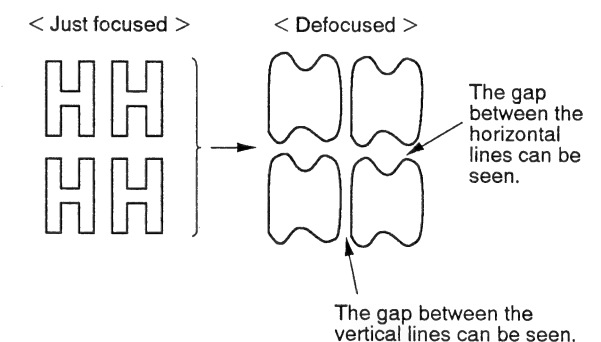


Fig. 26

- 4) Press the **[MEMORY]** key.
2. G2 volume adjustment
 - 1) Short pins ① and ② on the CF2-3 connector of the CF-2 board. (Remove the L-6 connector from the L board and attach it to pins ① and ② of the CF2-3 connector to short them.)
 - 2) Input a high vision signal (Shibasoku TG91E6, etc.)
 - 3) Press the **[TEST]** key to set an all-white signal.
 - 4) Press the **[PAGE]** key and select PAGE 4.
 - 5) Press the (**◀** and **▶**) arrow keys to select HDTV1.
 - 6) Press the (**▲** and **▼**) arrow keys to select input signal mode.
 - 7) Next, press the **◀** or **▶** key to select RGB or Y, Pb, Pr according to the input.

5. VID2 white balance adjustment (9300K)
 - 1) Press the **PAGE** key and select PAGE4.
 - 2) Select VID2.
 - 3) Carry out steps 1) and 2) of the procedure for HDTV1.
 - 4) Press ADJ R/B and adjust so that
$$x=0.284 \pm 0.015$$
$$y=0.297 \pm 0.025$$
 - 5) Press the **MEMORY** key.



- 13) Remove the short on the CF2-3 connector.
3. HDTV1 white balance adjustment (6500K)
 - 1) Press the W/B GAIN key.
 - 2) Press the TEST KEY and hold it for at least 5 seconds and output a 100 IRE all-white signal.
 - 3) Use a color meter (Minoluta CS-100 or the like).
Press ADJ R/B and adjust so that
$$x=0.313 \pm 0.015$$
$$y=0.329 \pm 0.015$$

※ Do not press the ADJ G key.
 - 4) Press the MEMORY key.
4. HDTV2 white balance adjustment (9300K)
 - 1) Press the PAGE key and select PAGE4.
 - 2) Select HDTV2.
 - 3) Carry out Steps 1) and 2) of the procedure for HDTV1.
 - 4) Press ADJ R/B and adjust so that
$$x=0.284 \pm 0.015$$
$$y=0.297 \pm 0.025$$
 - 5) Press the MEMORY key.
5. VID1 white balance adjustment (6500K)
 - 1) Press the PAGE key and select PAGE4.
 - 2) Select VID1.
 - 3) Carry out steps 1) and 2) of the procedure for HDTV1.
 - 4) Press ADJ R/B and adjust so that
$$x=0.313 \pm 0.015$$
$$y=0.329 \pm 0.015$$
 - 5) Press the MEMORY key.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

SECTION 5

SAFETY RELATED ADJUSTMENTS

When exchanging ☒ part check HV hold-down circuit, HV regulation circuit, LOW B protector circuit and beam current protector circuit.

☒ R33, R34 [HV hold-down] PA board

☒ IC2, Q7, D9, D12, C13, R20, R21, R22, R23, R24, R32, R33, R34, R35, R36, R82, HV BLOCK, PA mount

☒ R41, R42 [HV regulation] PA board

☒ IC1, IC6, IC7, IC8, IC9, D13, C16, R37, R38, R39, R40, R41, R42, R53, R55, R56, R58, R59, R129, X1, HV BLOCK, PA mount, PB mount

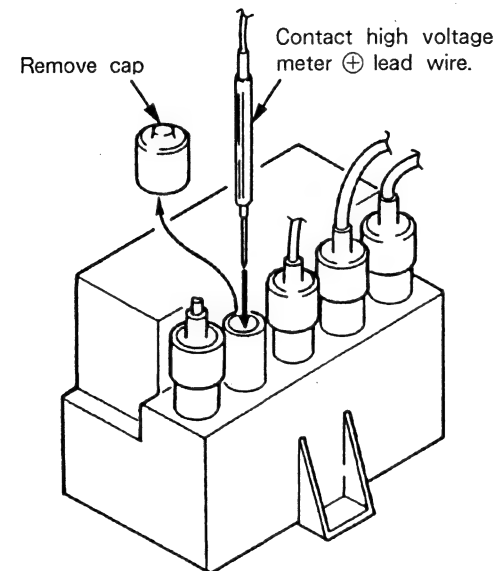
☒ R29, R30 [LOW B protector] PA board

☒ IC1, IC3, IC5, Q8, D4, D5, D10, D11, R9, R10, R26, R28, R29, R30, R31, R88, R95, PA mount

☒ R1, R4 [Beam current protector] PA board

☒ IC2, IC3, IC5, Q1, Q2, Q7, Q8, D4, D5, D9, R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R20, R21, R22, R23, R24, R43, R44, R45, R46, R47, R82, R88, R119, R120, R121, R122, R199 (DA board), PA mount, PB mount

- Turn variable resistor between TP12 – TP14 again and raise high voltage. Confirm hold-down circuit operates at $34.0 \pm 0.3\text{kV}$ and raster disappears.
- Next, adjust HV regulation.



☒ R41, R42 : HV regulation

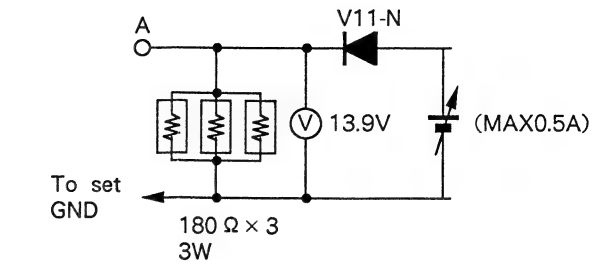
In case of using high voltage meter.

- Confirm set power is OFF.
- Connect high voltage meter \oplus to HV filter vacant terminal and \ominus to chassis earth.
- Set variable resistor between PA board TP12 – TP14 to $27\text{k}\Omega$.
- Turn set power ON.
- Press CUT – OFF key and cut – off R, G, B.
- Turn variable resistor between TP12 – TP14 to change resistance value and adjust high voltage to around $33.0 \pm 0.3\text{kV}$.
- Turn set power OFF.
- Remove variable resistor between TP12 – TP14. Measure the variable resistor resistance value and solder on the same amount of resistance to R41, R42.
- Turn set power OFF.
- Confirm high voltage meter reads $33.0 \pm 0.3\text{kV}$.
- Turn set power OFF and remove high voltage meter.

☒ R29, R30 : LOW B Protector

• Prepare jig circuit as shown in figure.

• Adjust until high voltage meter shows 13.9V.



- Turn set power ON.
- Contact jig circuit A point to PA board TP6 (12V line) for 0.5 – 1 sec, and remove immediately. Confirm power turns OFF when doing so.
- If power does not turn OFF, adjust R29, R30.

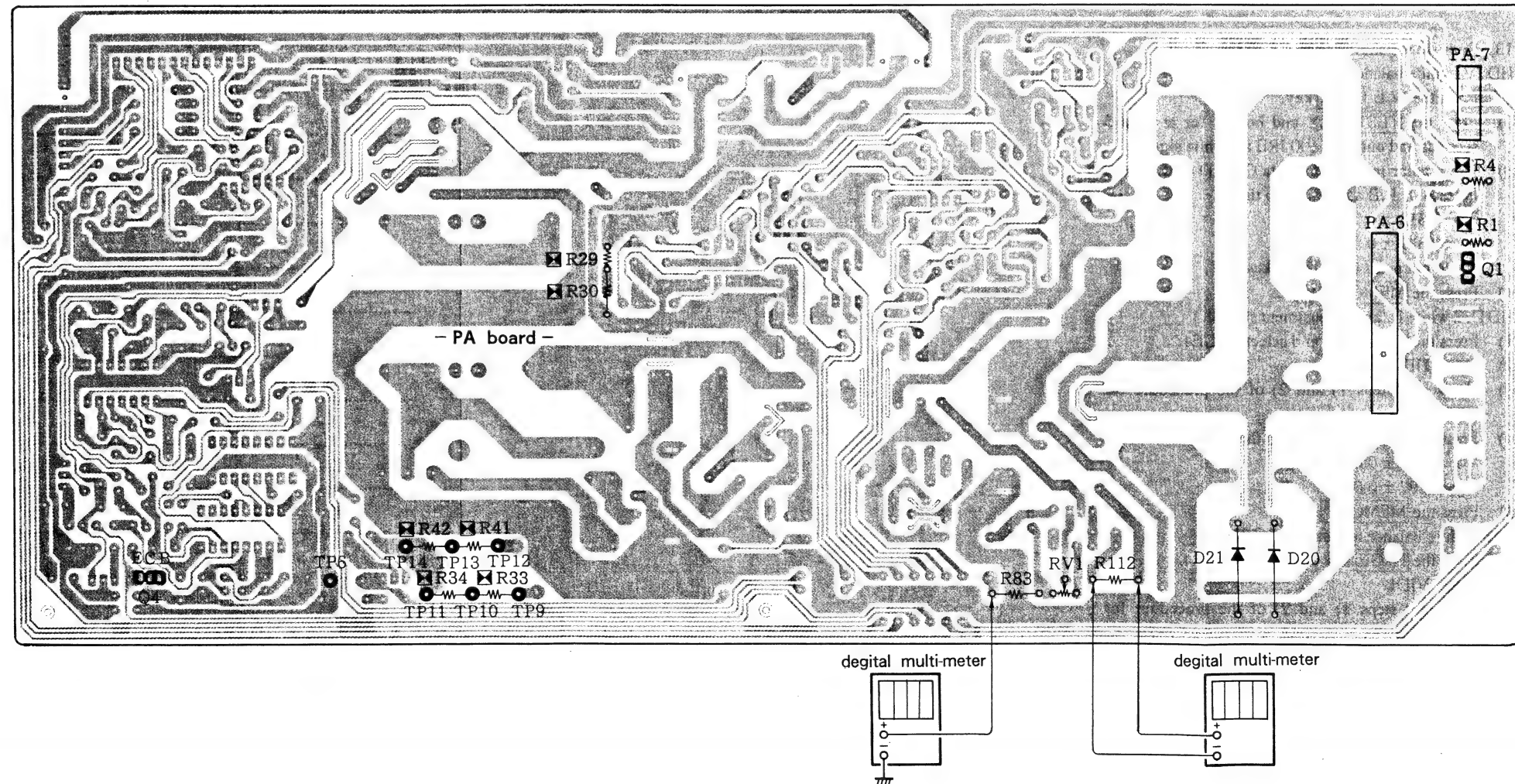
☒ R1, R4

- Confirm
- Disconr shown
- Short c
- Turn s
- Input n BRT at und
- If prot
- Remove
- Next, s
- Turn s
- Send t confirm disappe
- When
- Remov

☒ R33, R34 : HV Hold-down

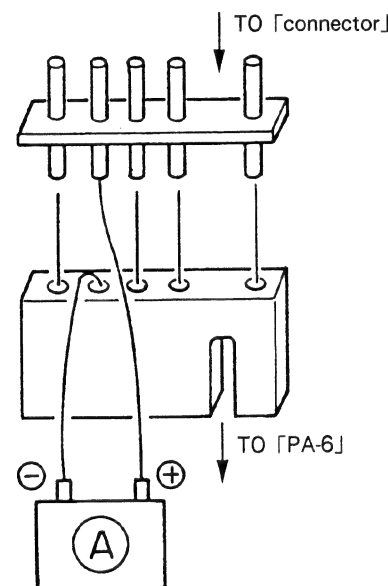
In case of using high voltage meter.

- Confirm set power is turned OFF.
- Connect high voltage meter \oplus to HV filter vacant terminal and \ominus to chassis earth.
- Remove resistance mounted between PA board TP9 – TP11. Connect variable resistor and set at $47\text{k}\Omega$.
- Remove resistance mounted between PA board TP12 – TP14. Connect variable resistor and set at $27\text{k}\Omega$.
- Turn RV1 fully counterclockwise.
- Turn set power ON.
- Input monoscope signal, and set CONTR and BRT at maximum.
- Turn variable resistor between TP12 – TP14 to change resistance value and adjust high voltage to around $34.0 \pm 0.3\text{kV}$.
- Turn variable resistor between TP9 – TP11 to change resistance value, adjust high voltage to around $34.0 \pm 0.3\text{kV}$, and confirm hold-down circuit operates and raster disappears.
- Turn set power OFF.
- Remove variable resistor between TP9 – TP11. Measure the variable resistor resistance value and solder on the same amount of resistance to R33, R34.
- Next, slightly raise variable resistor resistance value between TP12 – TP14.
- Turn set power ON.



☒ R1, R4 : Beam Current Protector

1. Confirm set power is turned OFF.
2. Disconnect PA board connector PA-6 and connect jig shown in figure.
3. Short circuit PA board Q1 emitter and collector.
4. Turn set power ON.
5. Input monoscope signal, send beam current by CONTR, BRT and G2VR, and confirm protector circuit operates at under $4700 \mu A$ and raster disappears.
6. If protector circuit does not operate, adjust R4.
7. Remove jig short-circuiting Q1 emitter and collector.
8. Next, short-circuit Q4 emitter and collector.
9. Turn set power ON.
10. Send beam current by CONTR, BRT and G2VR, and confirm protector operates at under $4700 \mu A$ and raster disappears.
11. When protector does not operate, adjust R1.
12. Remove jig short-circuiting Q4 emitter and collector.



To Check without Using High Voltage Meter

☒ R33, R34 : HV Hold-down

1. Use voltage dividing network shown in figure to calibrate detection unit.

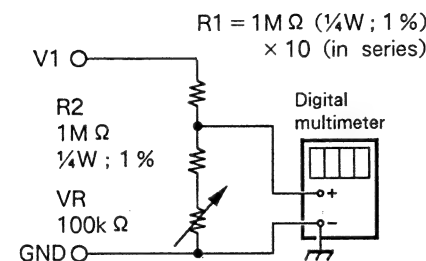
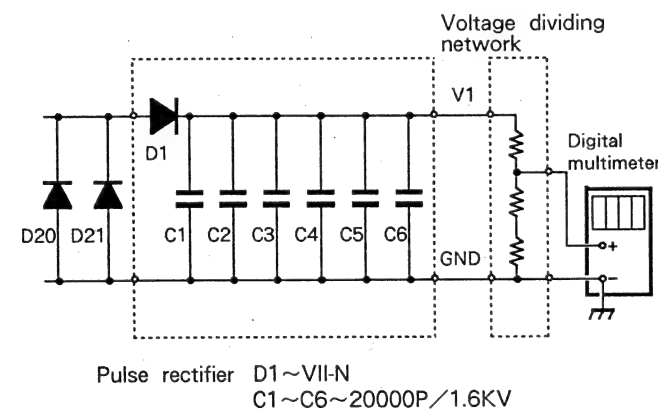


Fig. 1 : Voltage dividing network

2. Remove PA board connector (PA-7) to hold down high voltage. Connect V1 to 100V line of set and read V1 voltage with digital multimeter. Next, adjust variable resistor (VR) so that digital multimeter value is 1/10 of V1.
3. Connect pulse rectifier between PA board D20 or D21 anode and cathode.



4. Confirm set power is turned ON.
5. Confirm pulse rectifier and voltage dividing network are connected.
6. Remove resistance mounted between PA board TP9-TP11, connect variable resistor and set at $47k\Omega$.
7. Remove resistance mounted between TP12-TP14, connect variable resistor and set at $27k\Omega$.
8. Turn RV1 fully counterclockwise.
9. Turn set power ON.
10. Input monoscope signal, and set CONTR and BRT at maximum.
11. Turn variable resistor between TP12-TP14 and adjust until digital multimeter value is $96.5 \pm 0.5VDC$.
12. Turn variable resistor between TP9-TP11, and confirm hold-down circuit operates and raster disappears when digital multimeter is $96.5 \pm 0.5VDC$.
13. Turn set power OFF.

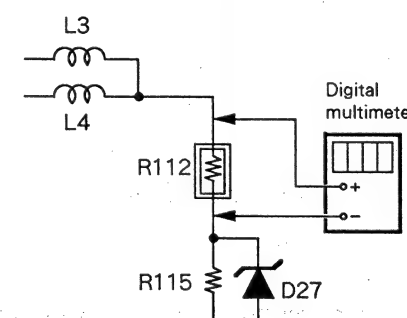
14. Remove variable resistor between TP9-TP11. Measure the variable resistor resistance value and solder on the same resistance variable resistor to R33, R34.
15. Slightly raise variable resistor resistance between TP12-TP14.
16. Turn set power ON.
17. Turn variable resistor between TP12-TP14 and confirm hold-down circuit operates and raster disappears when digital multimeter value is $96.5 \pm 0.5VDC$.
18. Next, adjust HV regulation.

☒ R41, R42 : HV Regulation

1. Confirm set power is OFF.
2. Set variable resistor between PA board TP12-TP14 at $27k\Omega$.
3. Turn set power ON.
4. Press CUT-OFF key to cut-off R, G, B.
5. Turn variable resistor between TP12-TP14 and change resistance value. Confirm digital multimeter value is $83.5 \pm 0.5VDC$.
6. Turn set power OFF.
7. Remove TP12-TP14 variable resistor. Measure the variable resistor resistance value and solder on the same resistance variable resistor to R41, R42.
9. Turn set power ON.
10. Confirm digital multimeter value is $83.5 \pm 0.5VDC$.
11. Turn set power OFF and remove pulse rectifier.

HV Converter Drive Adjustment (RV1)

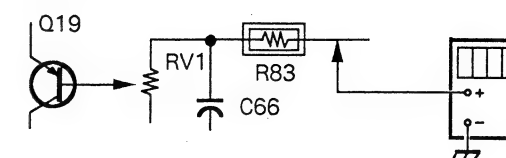
1. Connect digital multimeter on both ends of PA board R112.



2. Turn set power ON.
3. Press Commander CUT-OFF **R** **G** **B** and cut off R, G, B.
4. Adjust RV1 to $10.5 \pm 0.5V$.
5. Turn set power OFF.

Confirming +B MAX Voltage

1. Confirm set power is turned OFF.
2. Connect digital multimeter to PA board R83 and GND.



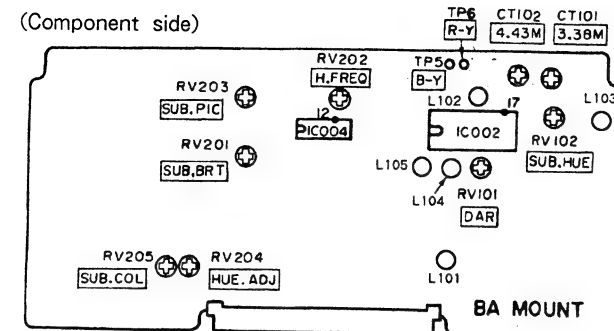
3. Input monoscope signal and turn set power ON.
4. Press CUT-OFF key and cut-off R, G, B.
5. Confirm $100 \pm 1V$.

Check after Exchanging Power Source Block

After exchanging power source block, check that +B MAX voltage is within the standard.

SECTION 6 CIRCUIT ADJUSTMENTS

6-1. BA BOARD ADJUSTMENT

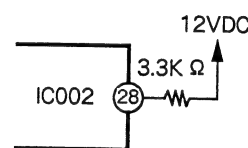


H. FREQ Adjustment (RV202)

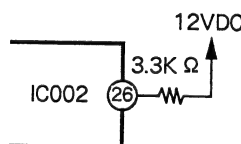
1. Ground IC004 pin ②.
2. Insert 10:1 probe in TP7 and connect frequency counter.
3. Adjust RV202 to $16,400 \pm 50\text{Hz}$.

REF. OSC Adjustment (CT101, CT102)

1. Input PAL color bar.
2. Connect $3.3\text{K}\Omega$ to IC002 pin ②, apply 12VDC and set at PAL forced MODE.



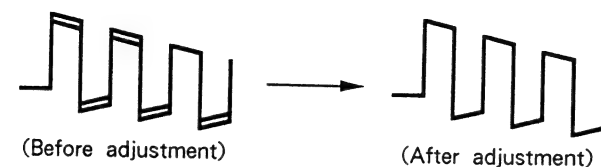
3. Ground IC002 pin ① and turn color-killer OFF.
4. Adjust CT102 until screen movement slows.
5. Disconnect IC002 pin ① grounding.
6. Input NTSC3.58 color bar.
7. Connect $3.3\text{K}\Omega$ to IC002 pin ②, apply 12VDC and set at NTSC3.58 forced MODE.



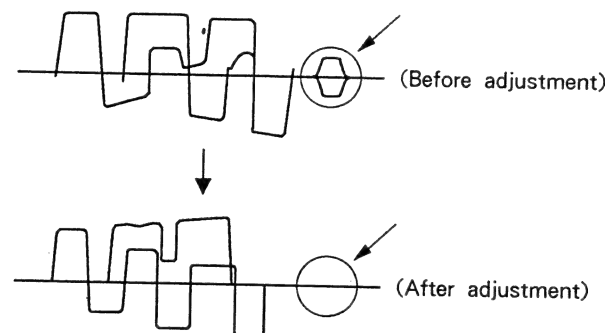
8. Ground IC002 pin ① and turn color-killer OFF.
9. Adjust CT101 until screen movement slows.
10. Disconnect $3.3\text{K}\Omega$ connected to IC.

1H DELAY LINE Adjustment (L103, RV101)

1. Input PAL color bar.
2. Connect oscilloscope to TP-5 and view wave form in H block.



3. Adjust L103 and minimize double line part of wave.
4. Input PAL special color bar.
5. Adjust RV101 until wave ANTIPAL part is at 0-level.



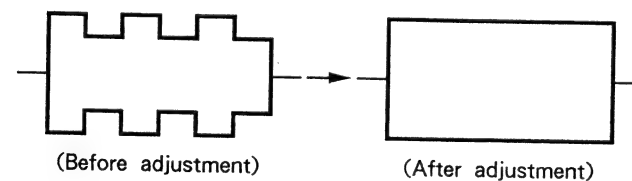
*RV101 and L103 influence each other. Repeat adjustment until both conditions are satisfied.

SECAM ID Adjustment (L102)

1. Input SECAM color bar.
2. Connect digital multimeter to TP4.(input impedance over $50\text{M}\Omega$)
3. Adjust L102 level to maximum.

BELL Filter Adjustment (L101)

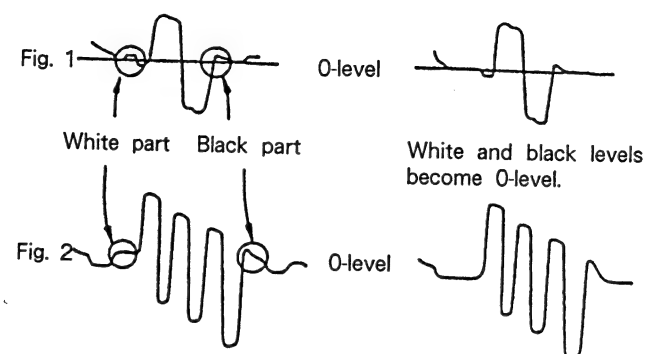
1. Input SECAM color bar.
2. Connect oscilloscope to TP3 and view wave form of H block.
3. Adjust L101 until wave is flat.



* Tracking L101 and L102.

SECAM DISCRI Adjustment (L104, L105)

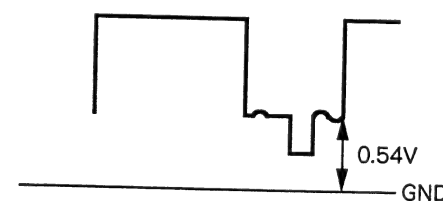
1. Input SECAM color bar.
2. Connect oscilloscope to TP6 and view wave form of H block.



3. Adjust L104 until white and black part of TP6 wave become 0-level.(Fig. 1)
4. Connect oscilloscope to TP5 and view wave form of H block.
5. Adjust L105 until white and black part of TP5 wave become 0-level (Fig. 2).

SUB BRIGHT Adjustment (RV201)

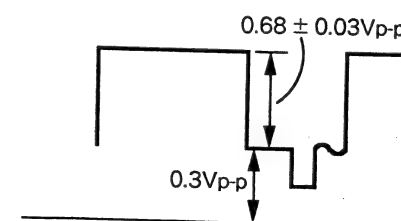
1. Input all white signal (100IRE).
2. Connect oscilloscope to BB board TP5 and view wave form of H block.



3. Adjust RV201 until pedestal level is 0.54V.

SUB PICTURE Adjustment (RV203)

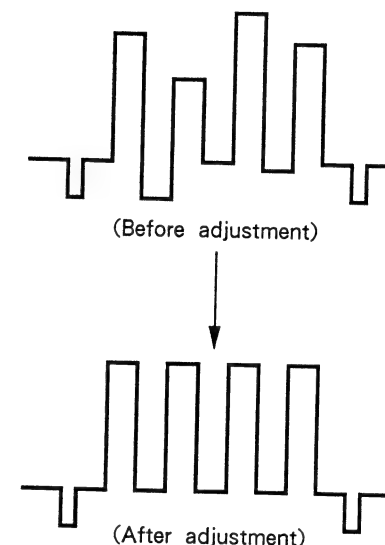
1. Input all white signal (100IRE).
2. Connect oscilloscope to BB board TP5 and view wave form of H block.



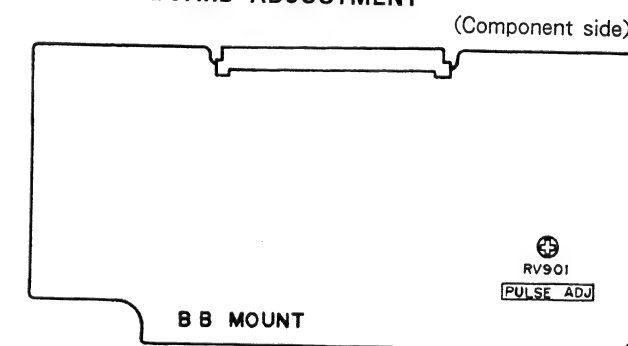
3. Adjust RV203 until pedestal to peak is $0.68 \pm 0.03\text{Vp-p}$.

HUE, SUB COLOR, SUB HUE Adjustment (RV204, RV205, RV102)

1. Input PAL color bar signal.
2. Connect oscilloscope to TP10 and view wave form of H block.
3. Adjust RV204 (HUE) and RV205 (SUB COL) until wave is flat.

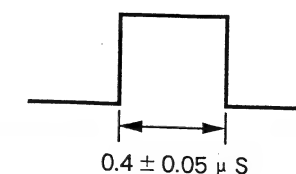


6-2. BB BOARD ADJUSTMENT

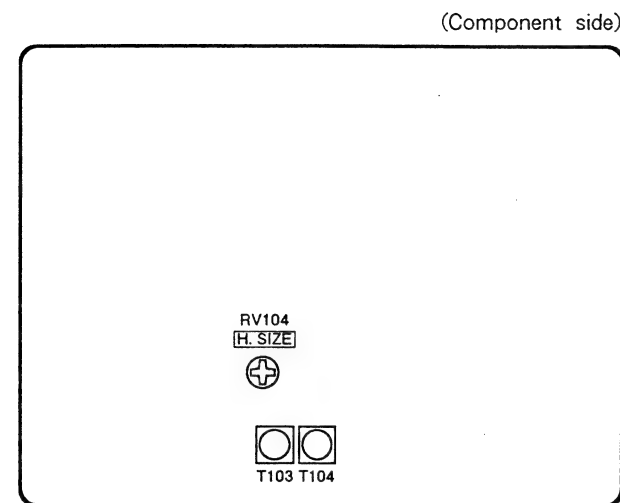


PULSE Adjustment (RV901)

1. Input color signal.
2. Connect oscilloscope to IC413 pin ⑥.
3. Adjust RV901 so that pulse width is $0.4 \pm 0.05\mu\text{S}$.

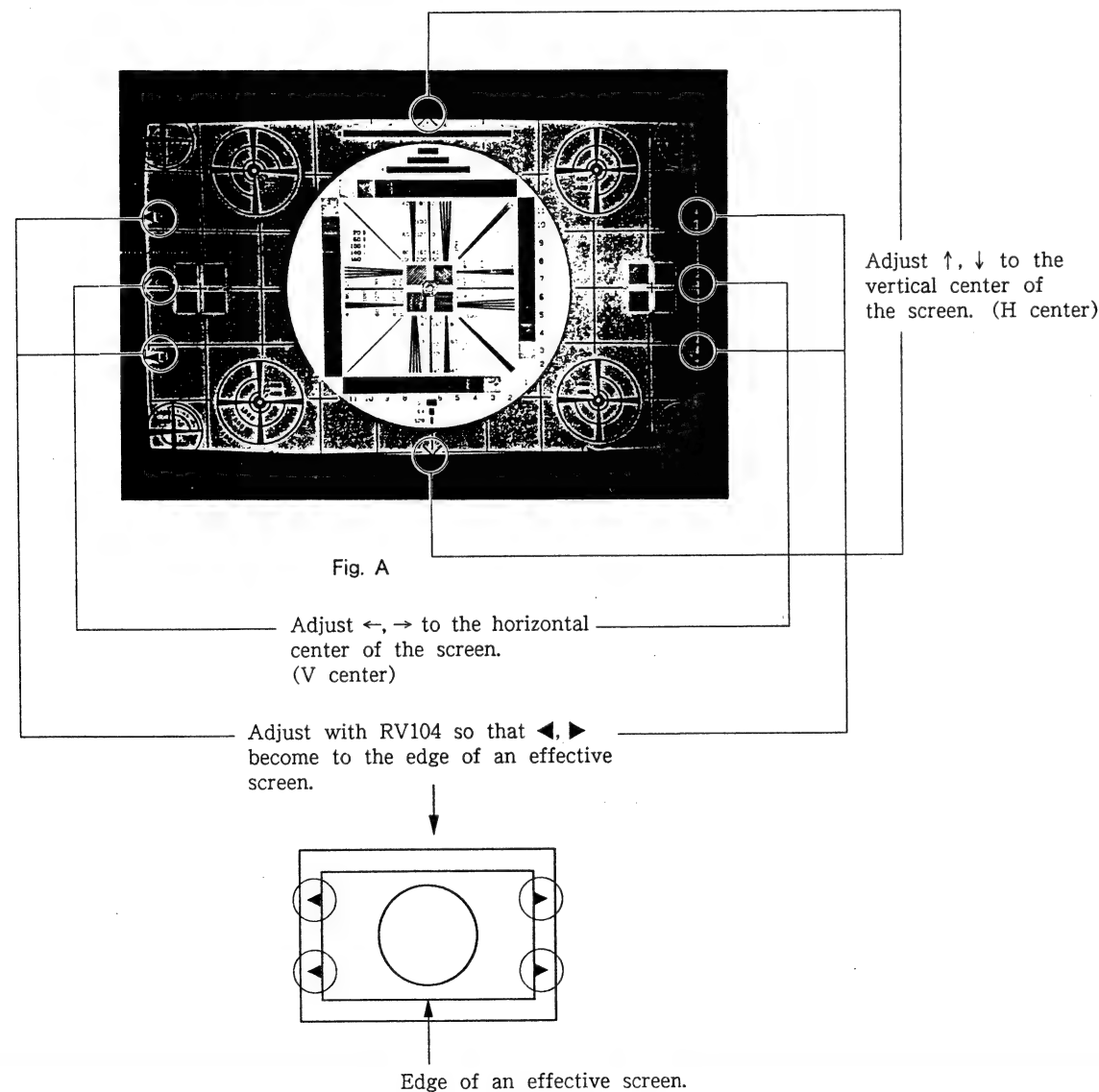


6-3. E BOARD ADJUSTMENT

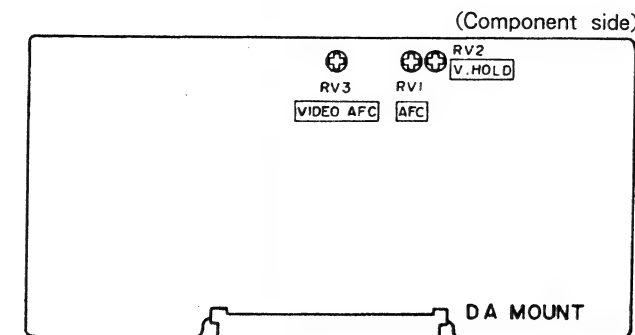


H. SIZE Adjustment (RV104)

1. Input monoscope pattern signal using HDTV signal generator (Shibasoku TG91E6 etc).
2. With pressing RGB [SHIFT] key and next CUT OFF [R] and [B] keys on Remote Commander, the green HD monoscope pattern appears on the screen.
3. Adjust H center (marked "↑" and "↓" on the monoscope pattern) to the horizontal center of the screen using arrow keys [←] and [→]. (See Fig. A)
4. Adjust V center (marked "←" and "→" on the monoscope pattern) to the vertical center of the screen using arrow keys [↑] and [↓]. (See Fig. A)
5. Maximize H. SIZE with pressing RGB [SIZE] key and next arrow key [→].
6. Adjust with RV104 (H. SIZE) so that "←" (left side) and "→" (right side) on the screen become to the edge of an effective screen.



6-4. DA BOARD ADJUSTMENT



AFC Adjustment (RV1)

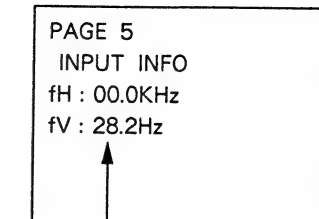
1. Input HDTV signal using HDTV signal generator (Shibasoku TG91E6 etc.).
2. Turn RV1 full clockwise.
3. Press S1 (HD OFF) switch and set at picture free running state.
4. Turn RV1 counterclockwise a little at a time and stop picture.
5. Connect TP2 to frequency counter.
6. Read frequency counter indicated value while pressing S1 switch.
The value is f1.
7. Turn RV1 full counterclockwise.
8. Press S1 switch and set at picture free running state.
9. Turn RV1 clockwise a little at a time and stop picture.
10. Read frequency counter indicated value while pressing S1 switch.
The value is f2.
11. Adjust $\frac{f1 + f2}{2} \pm 200\text{Hz}$ value with RV1.

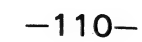
Video AFC Adjustment (RV3)

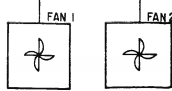
1. Input video signal. (fH = 15.75kHz, FV = 60Hz)
2. Turn RV3 (video AFC) full clockwise.
3. Press S1 (HD OFF) switch and set at picture free running state.
4. Turn RV3 counterclockwise a little at a time and stop picture.
5. Connect frequency counter to TP2.
6. Read frequency counter indicated value while pressing S1 switch.
The value is f1.
7. Turn RV3 full counterclockwise.
8. Press S1 and set at picture free running state.
9. Turn RV3 clockwise a little at a time and stop picture.
10. Read frequency counter indicated value while pressing S1.
The value is f2.
11. Adjust to $\frac{f1 + f2}{2} \pm 200\text{Hz}$ with RV3.

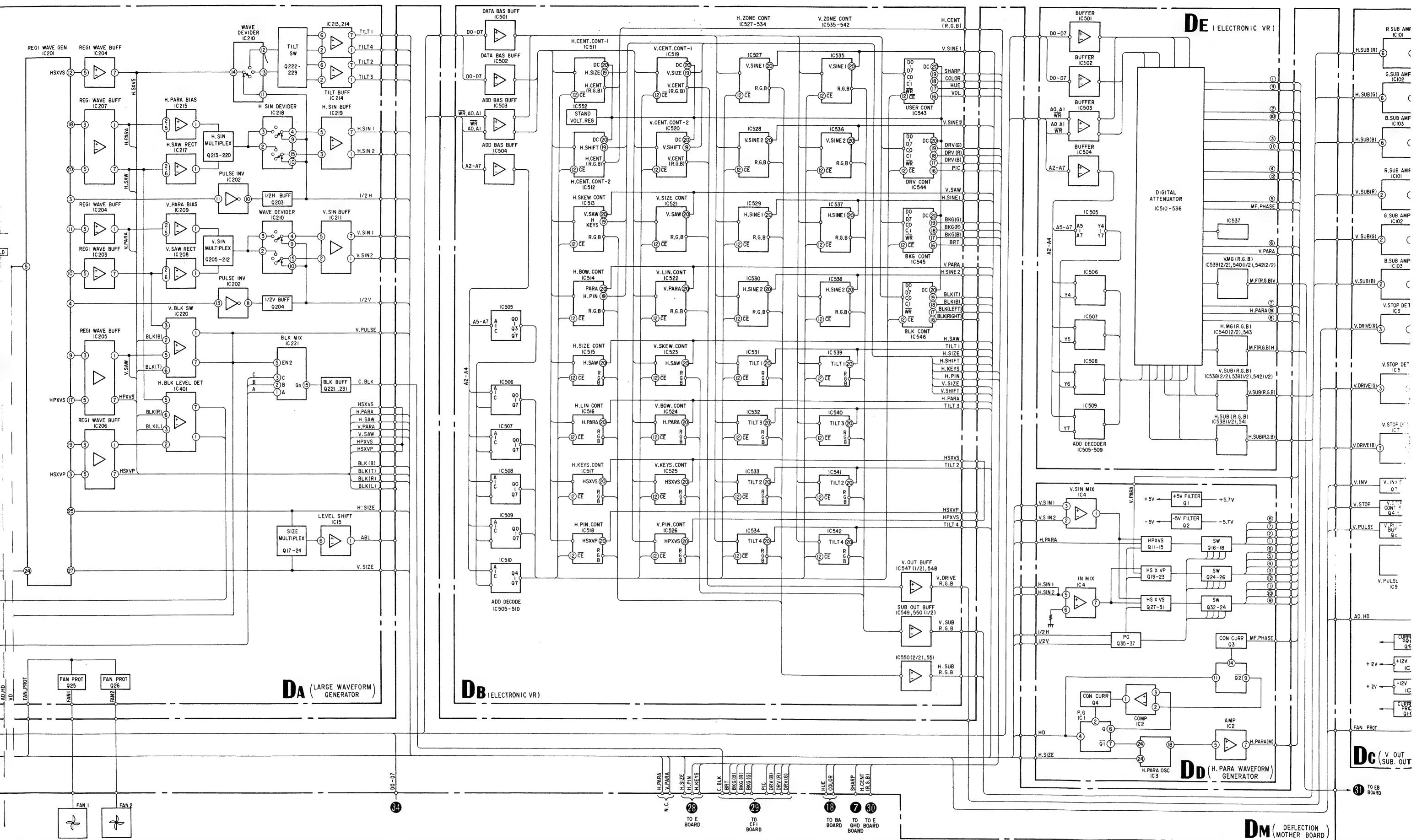
V HOLD Adjustment (RV2)

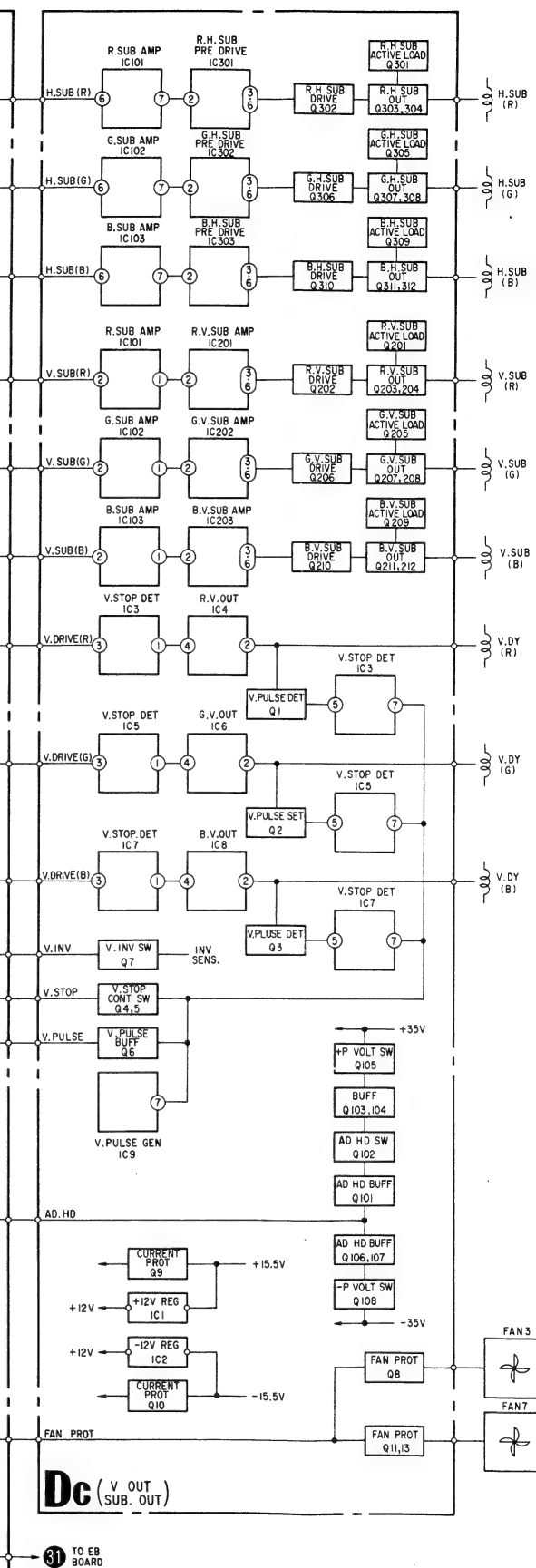
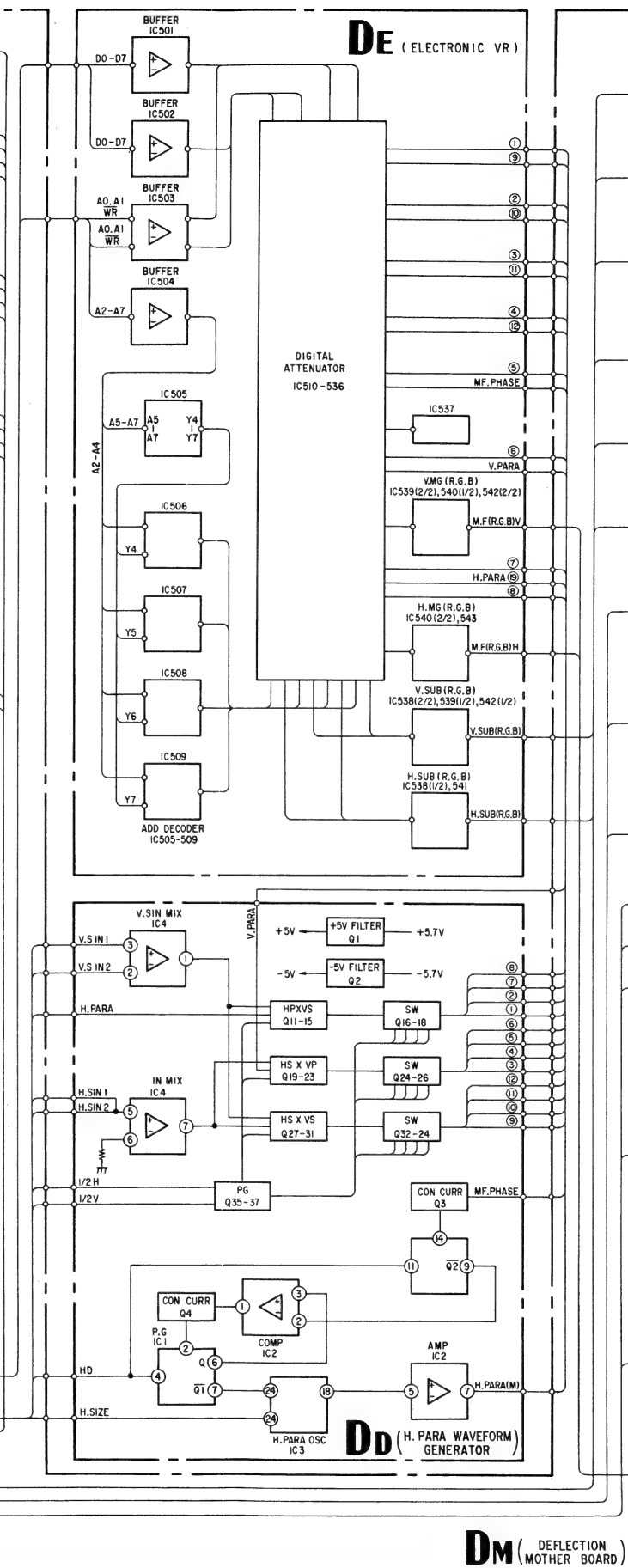
1. Set at No-signal state.
2. Press S2 (V SYNC OFF).
3. Press remote commander [PAGE] key and display PAGE 5.
4. Adjust until screen display fV is $28.0 \pm 2\text{Hz}$ with RV2 (V HOLD).

Adjust to RV2 $28.0 \pm 2\text{Hz}$

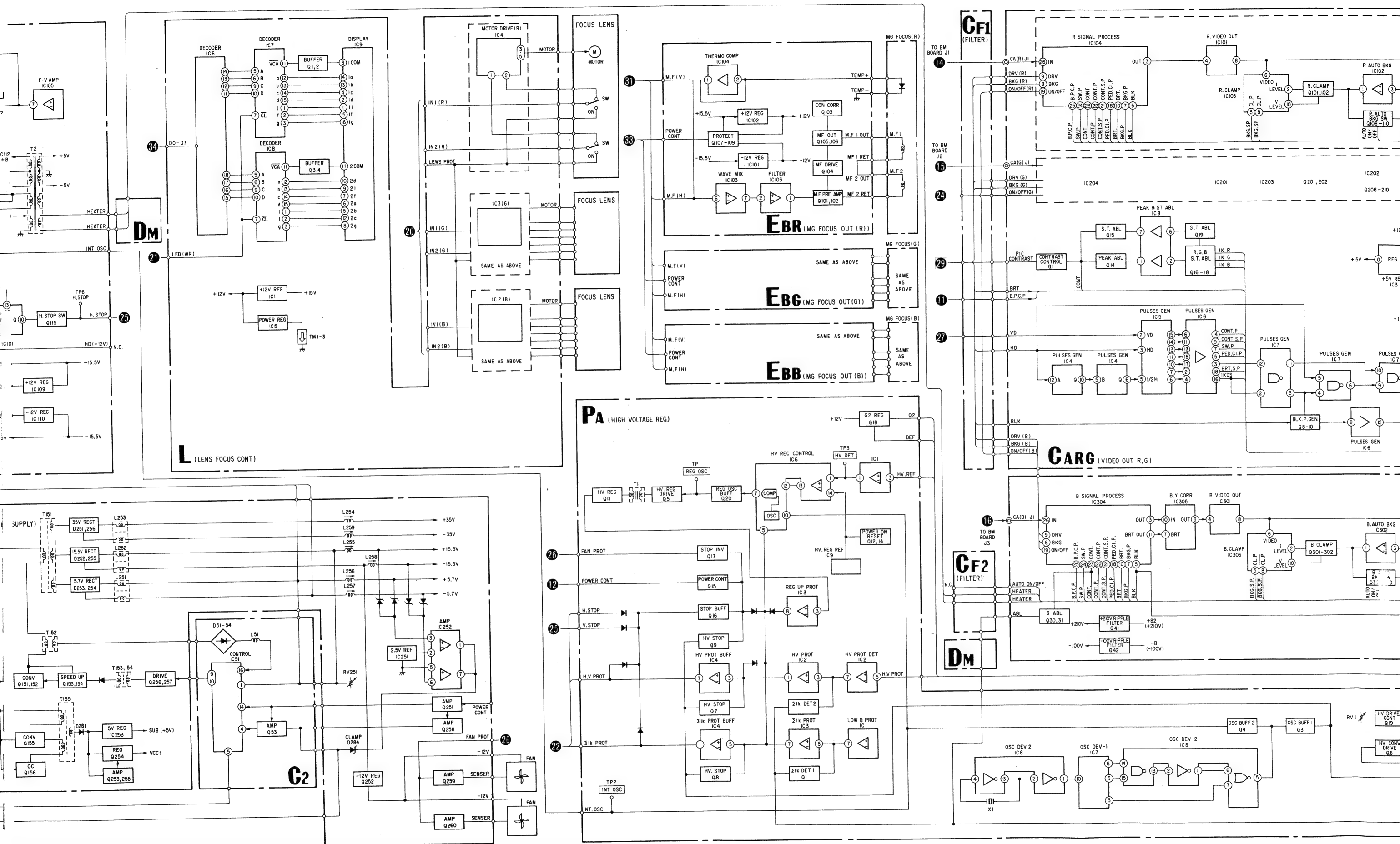




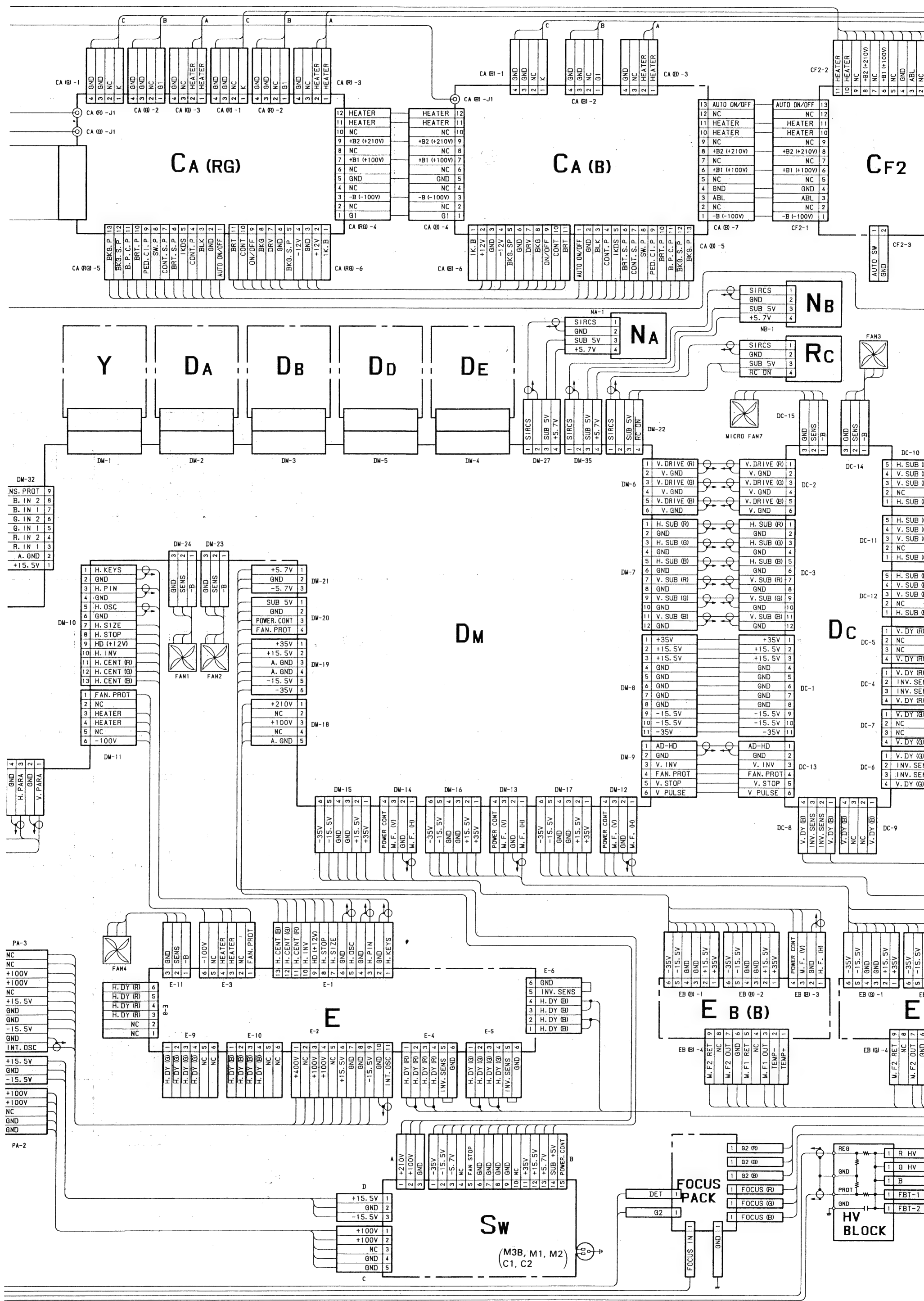


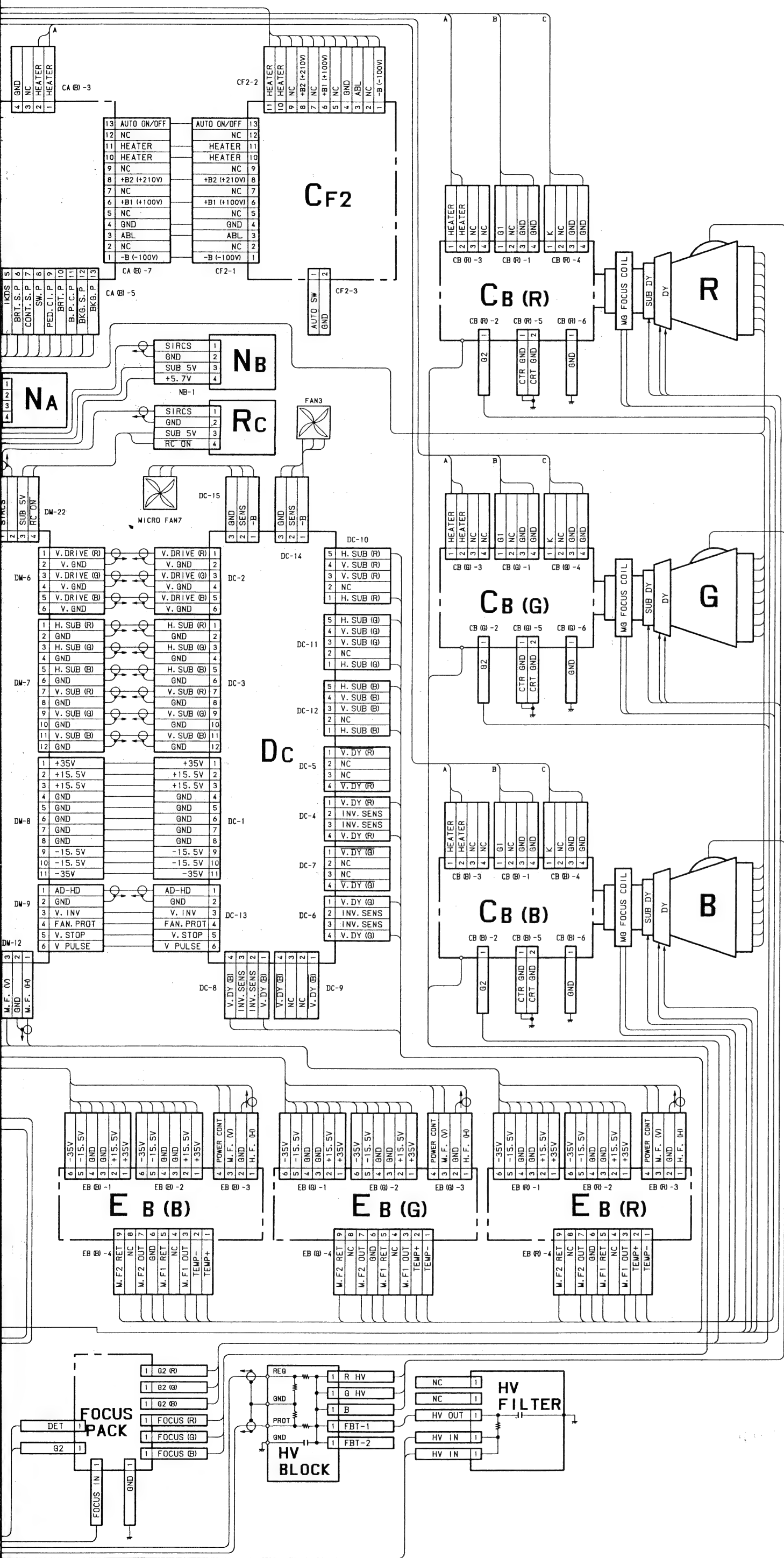




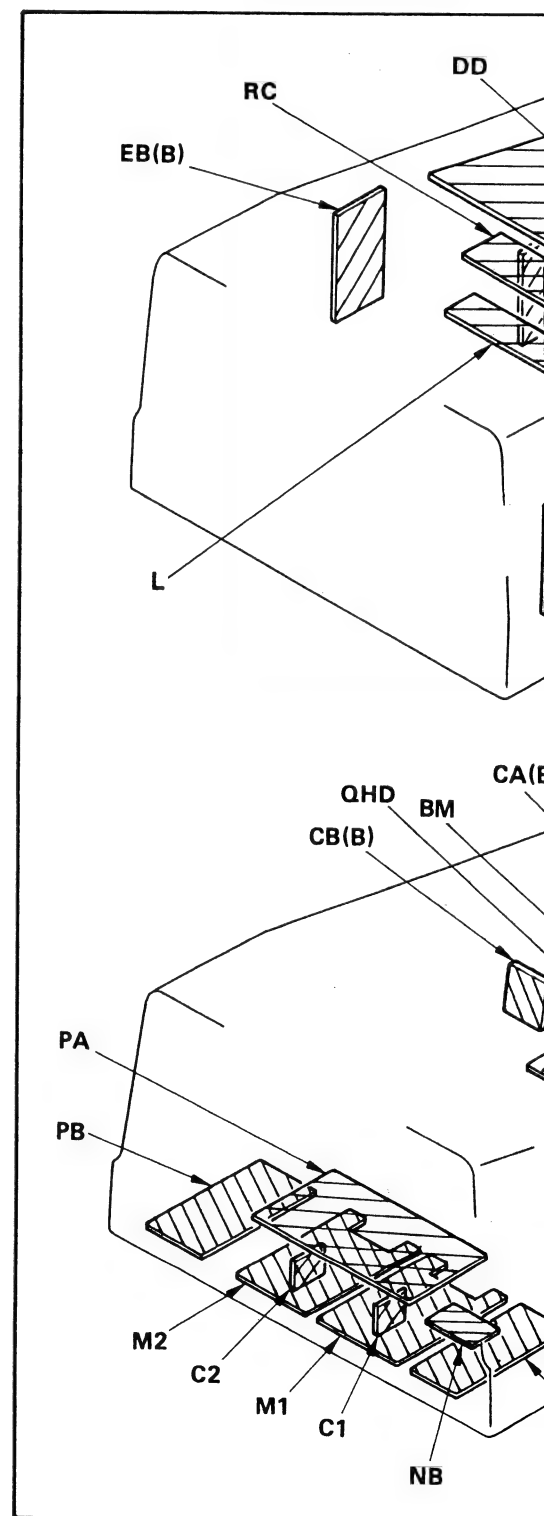


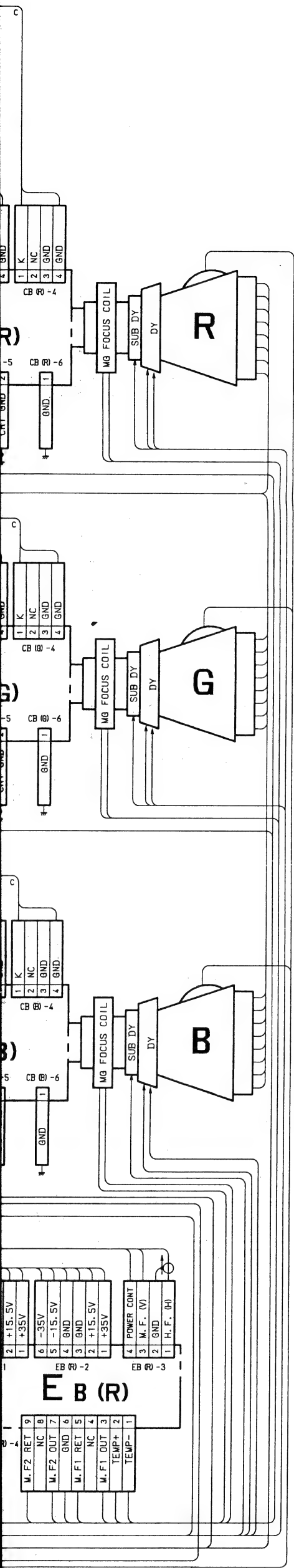




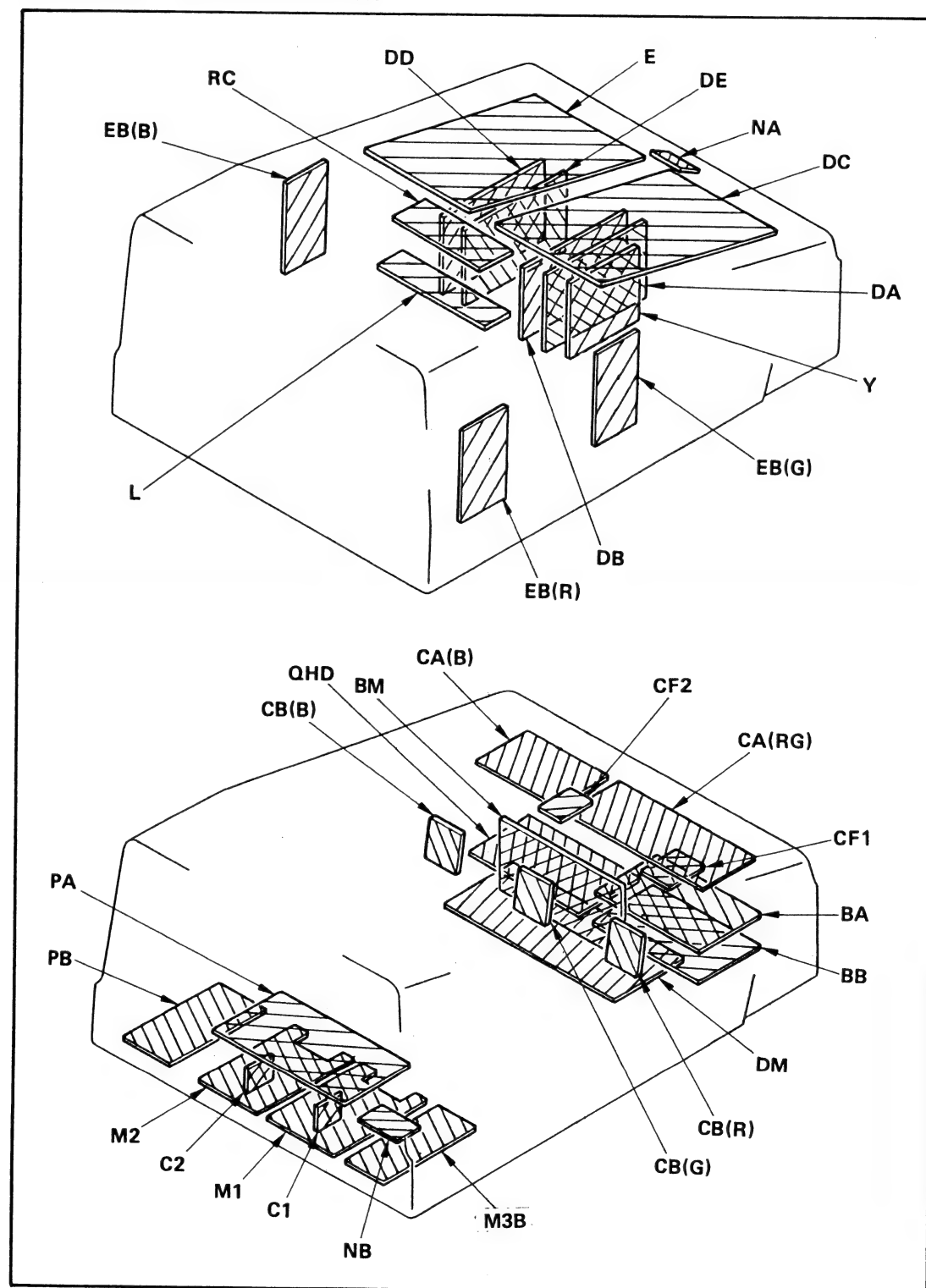


7-3. CIRCUIT BOARDS LOCATION





7-3. CIRCUIT BOARDS LOCATION



7-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm
Rating electrical power $\frac{1}{4}$ W

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by and repeat the adjustment until the specified value is achieved. (Refer to R1, 4, 29, 30, 33, 34, 41 and R42 adjust on page 99 - 102.)
- When replacing the part in below table, be sure to perform the related adjustment.

Part replaced ()	Adjustment ()
IC2, Q7, D9, D12, C13, R20, R21, R22, R23, R24, R32, R33, R34, R35, R36, R82 (PA Board) HV BLOCK, PA mount	R33, R34 (HV hold-down)
IC1, IC6, IC7, IC8, D13, C16, R37, R38, R39, R40, R41, R42, R53, R55, R56, R58, R59, R129, X1 (PA Board) HV BLOCK, PA mount, PB mount	R41, R42 (HV regulation)
IC1, IC3, IC5, Q8, D4, D5, D10, D11, R9, R10, R26, R28, R29, R30, R31, R88, R95 (PA Board) PA mount	R29, R30 (LOW B protector)
IC2, IC3, IC5, Q1, Q2, Q7, Q8, D4, D5, D9, R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R20, R21, R22, R23, R24, R43, R44, R45, R46, R47, R82, R88, R119, R120, R121, R122 (PA Board) R199 (DA Board) PA mount, PB mount	R1, R4 (Beam current protector)

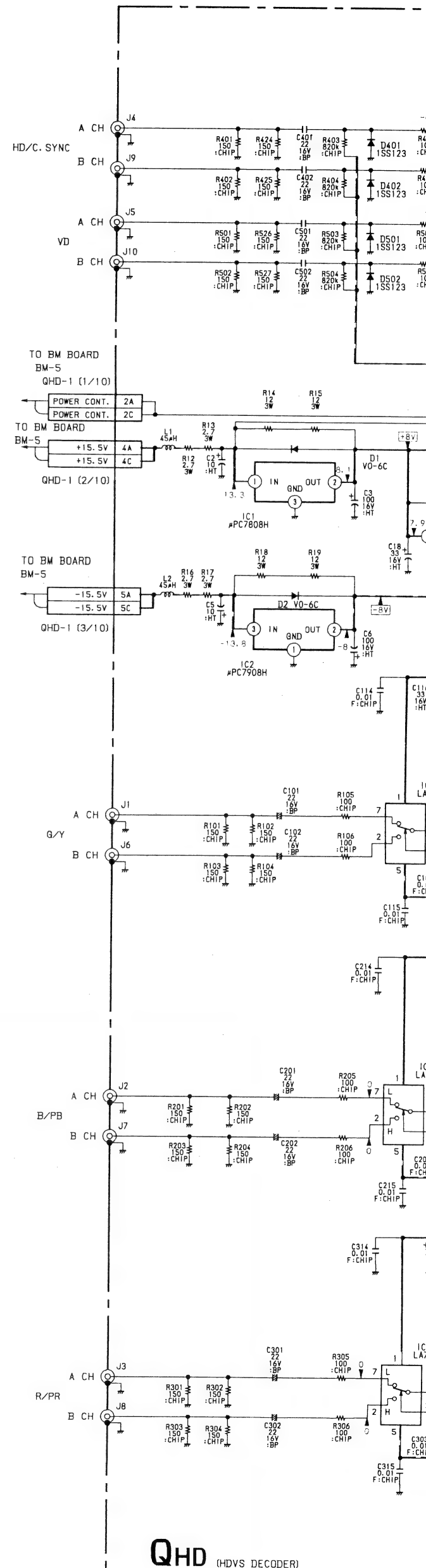
- All voltages are in V.
- Readings are taken with a 10 $\text{M}\Omega$ digital multimeter.
- Readings are taken with a PAL color-bar signal input.
no mark: with PAL color-bar signal received.
(): with SECAM color-bar signal received.
< >: with NTSC3.58 color-bar signal received.
< >: with NTSC4.43 color-bar signal received.
*: measurement impossibility.
- Voltage variations may be noted due to normal production tolerances.
- : B + bus.
- : B - bus.
- : signal path.

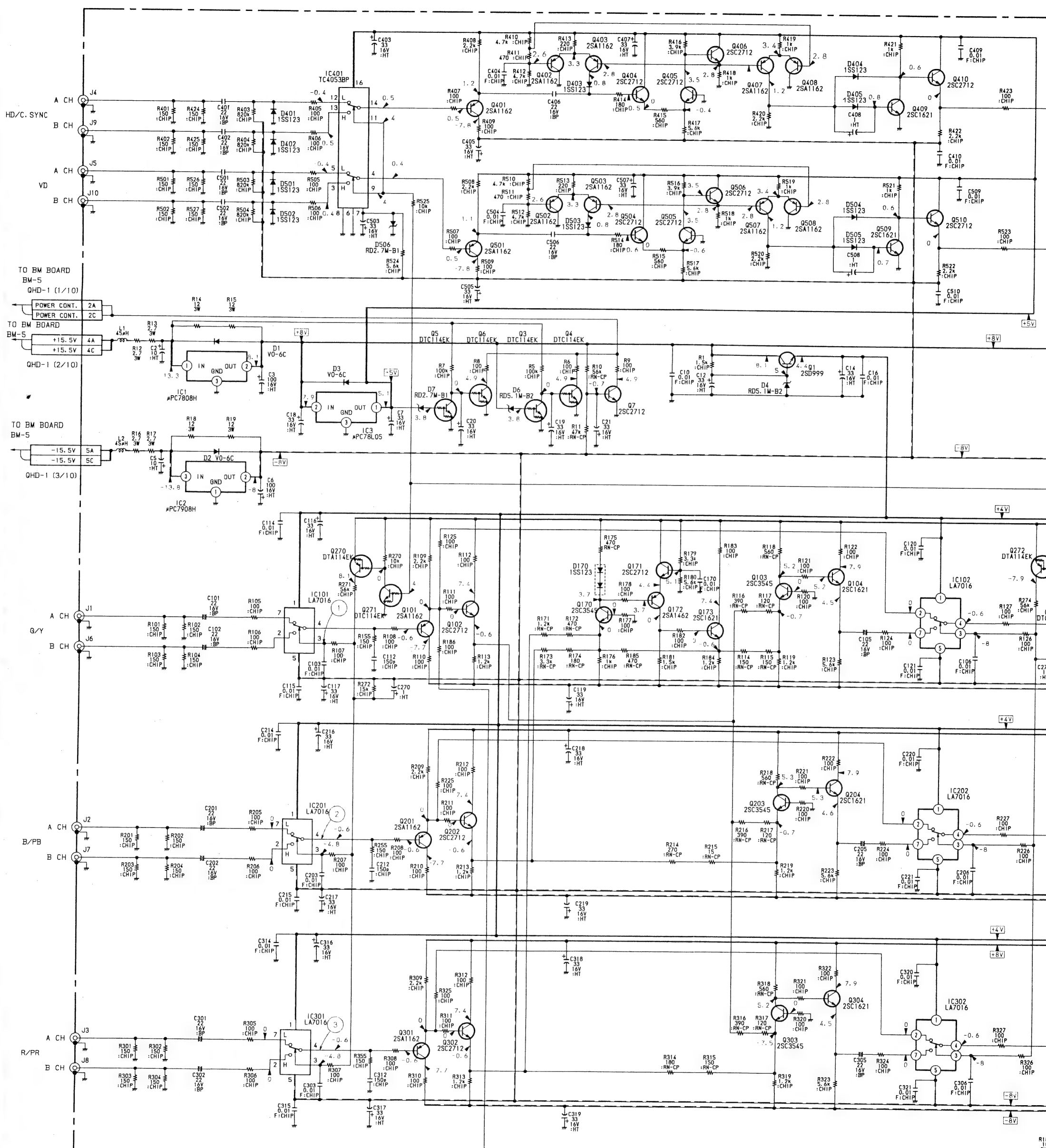
Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

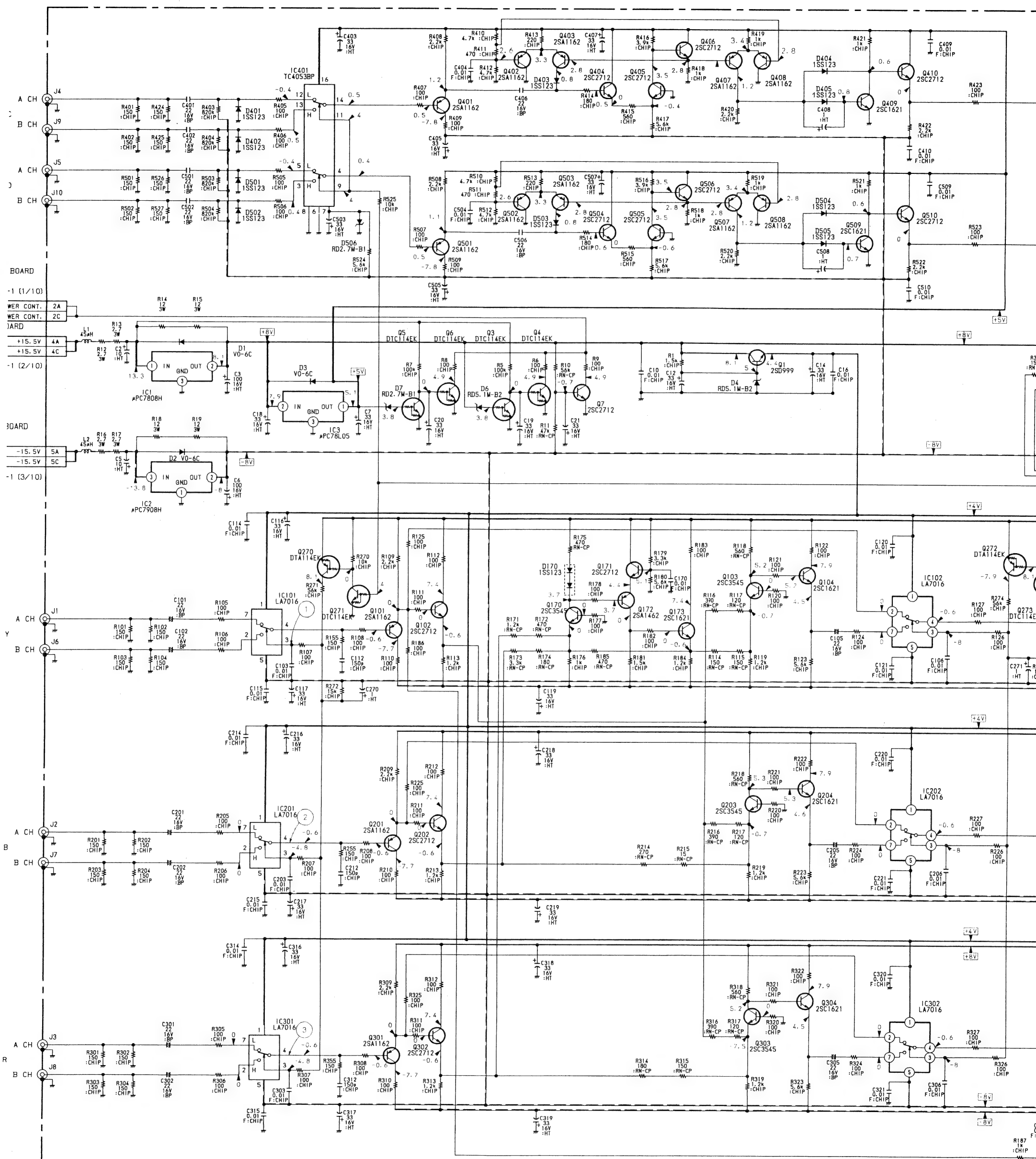
IC1	μ PC7808H	+8V REG	273	DTC114EK	CONTROL SW
2	μ PC7808H	-8V REG	274	DTA114EK	CONTROL SW
3	μ PC78L05	+5V REG	275	DTC114EK	CONTROL SW
101	LA7016	VIDEO SW	301	2SA1162	VIDEO BUFF
102	LA7016	VIDEO SW	302	2SC2712	VIDEO BUFF
103	LA7016	VIDEO SW	303	2SC3545	VIDEO MIX AMP
201	LA7016	VIDEO SW	304	2SC1621	VIDEO BUFF
202	LA7016	VIDEO SW	305	2SA1162	VIDEO BUFF
203	LA7016	VIDEO SW	306	2SC2712	VIDEO BUFF
301	LA7016	VIDEO SW	307	2SC3545	VIDEO MIX AMP
302	LA7016	VIDEO SW	308	2SC1621	VIDEO BUFF
303	LA7016	VIDEO SW	309	2SC3545	VIDEO BUFF
401	TC4053BP	VIDEO SW	310	2SA1462	VIDEO BUFF
			401	2SA1162	SYNC BUFF
Q1	2SD999	+4V REGULATOR	402	2SA1162	SYNC CHIP CLAMP
3	DTC114EK	PROT DETECTOR	403	2SA1162	SYNC CHIP CLAMP
4	DTC114EK	PROT DETECTOR	404	2SC2712	SYNC BUFF
5	DTC114EK	PROT DETECTOR	405	2SC2712	SYNC AMP
6	DTC114EK	PROT DETECTOR	406	2SC2712	SYNC BUFF
7	2SC2712	PROT DETECTOR	407	2SA1162	SYNC COMPARATOR
30	2SA1462	VIDEO MIX AMP	408	2SA1162	SYNC COMPARATOR
31	2SA1462	VIDEO BUFF	409	2SC1621	SYNC AMP
32	2SC2712	VIDEO BUFF	410	2SC2712	SYNC BUFF
33	2SA1162	VIDEO BUFF	501	2SA1162	SYNC BUFF
34	2SA1162	VIDEO BUFF	502	2SA1162	SYNC CHIP CLAMP
35	2SC2712	VIDEO BUFF	503	2SA1162	SYNC CHIP CLAMP
36	2SC2712	VIDEO BUFF	504	2SC2712	SYNC AMP
37	2SC3545	VIDEO MIX AMP	505	2SC2712	SYNC AMP
38	2SC3545	GAIN CONTROL	506	2SC2712	SYNC BUFF
39	2SC3545	GAIN CONTROL	507	2SA1162	SYNC COMPARATOR
40	2SA1462	VIDEO AMP	508	2SA1162	SYNC COMPARATOR
41	2SC3545	VIDEO BUFF	509	2SC1621	SYNC AMP
42	2SA1162	VIDEO BUFF	510	2SC2712	SYNC BUFF
101	2SA1162	VIDEO BUFF			
102	2SC2712	VIDEO BUFF	D1	V06C	REG PROT
103	2SC3545	VIDEO MIX AMP	2	V06C	REG PROT
104	2SC1621	VIDEO BUFF	3	V06C	REG PROT
105	2SA1162	VIDEO BUFF	4	RD5.1MB2	+4V REG
106	2SC2712	VIDEO BUFF	6	RD5.1MB2	+4V REG
107	2SC3545	VIDEO MIX AMP	7	RD2.7MB1	PROT DETECT
108	2SC1621	VIDEO BUFF	30	1SS123	VOLT DET
109	2SC3545	VIDEO BUFF	31	RD5.1MB2	DC LEVEL CONV
110	2SA1462	VIDEO BUFF	32	1SS123	TEMP COMP
170	2SC3545	VIDEO MIX AMP	101	1SS123	VOLT DET
171	2SC2712	VIDEO AMP	102	1SS123	VIAS
172	2SA1462	VIDEO BUFF	170	1SS123	TEMP COMP
173	2SC1621	VIDEO BUFF	201	1SS123	VOLT DET
174	2SC1621	VIDEO BUFF	202	1SS123	VIAS
201	2SA1162	VIDEO BUFF	301	1SS123	VOLT DET
202	2SC2712	VIDEO BUFF	302	1SS123	VIAS
203	2SC3545	VIDEO MIX AMP	401	1SS123	CLAMP
204	2SC1621	VIDEO BUFF	402	1SS123	CLAMP
205	2SA1162	VIDEO BUFF	403	1SS123	CLAMP
206	2SC2712	VIDEO BUFF	404	1SS123	SAT PROT
207	2SC3545	VIDEO MIX AMP	405	1SS123	SAT PROT
208	2SC1621	VIDEO BUFF	501	1SS123	CLAMP
209	2SC3545	VIDEO BUFF	502	1SS123	CLAMP
210	2SA1462	VIDEO BUFF	503	1SS123	CLAMP
270	DTA114EK	CONTROL SW	504	1SS123	SAT PROT
271	DTC114EK	CONTROL SW	505	1SS123	SAT PROT
272	DTA114EK	CONTROL SW	506	RD2.7MB1	DC LEVEL





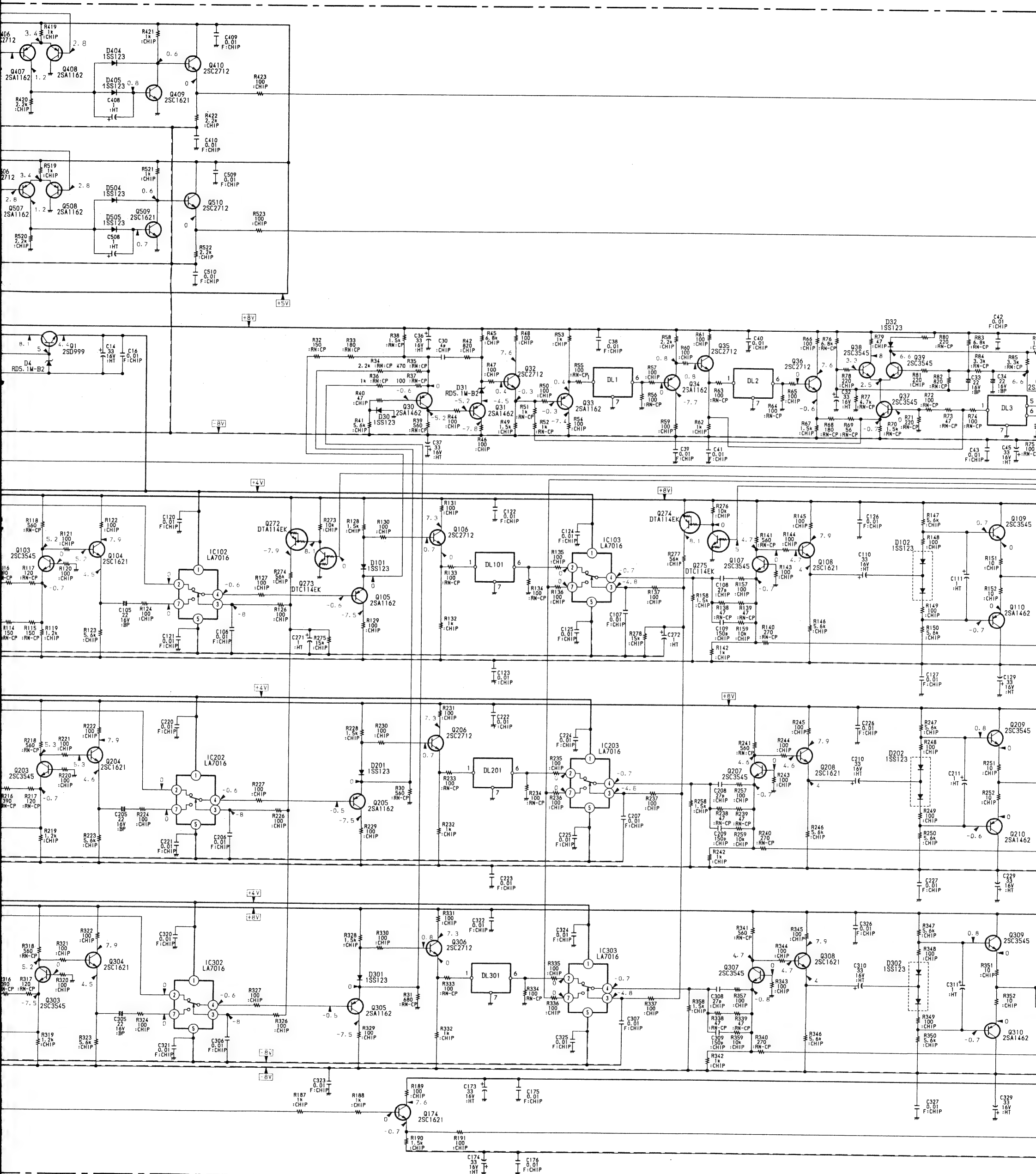
QHD (HDVS DECODER)

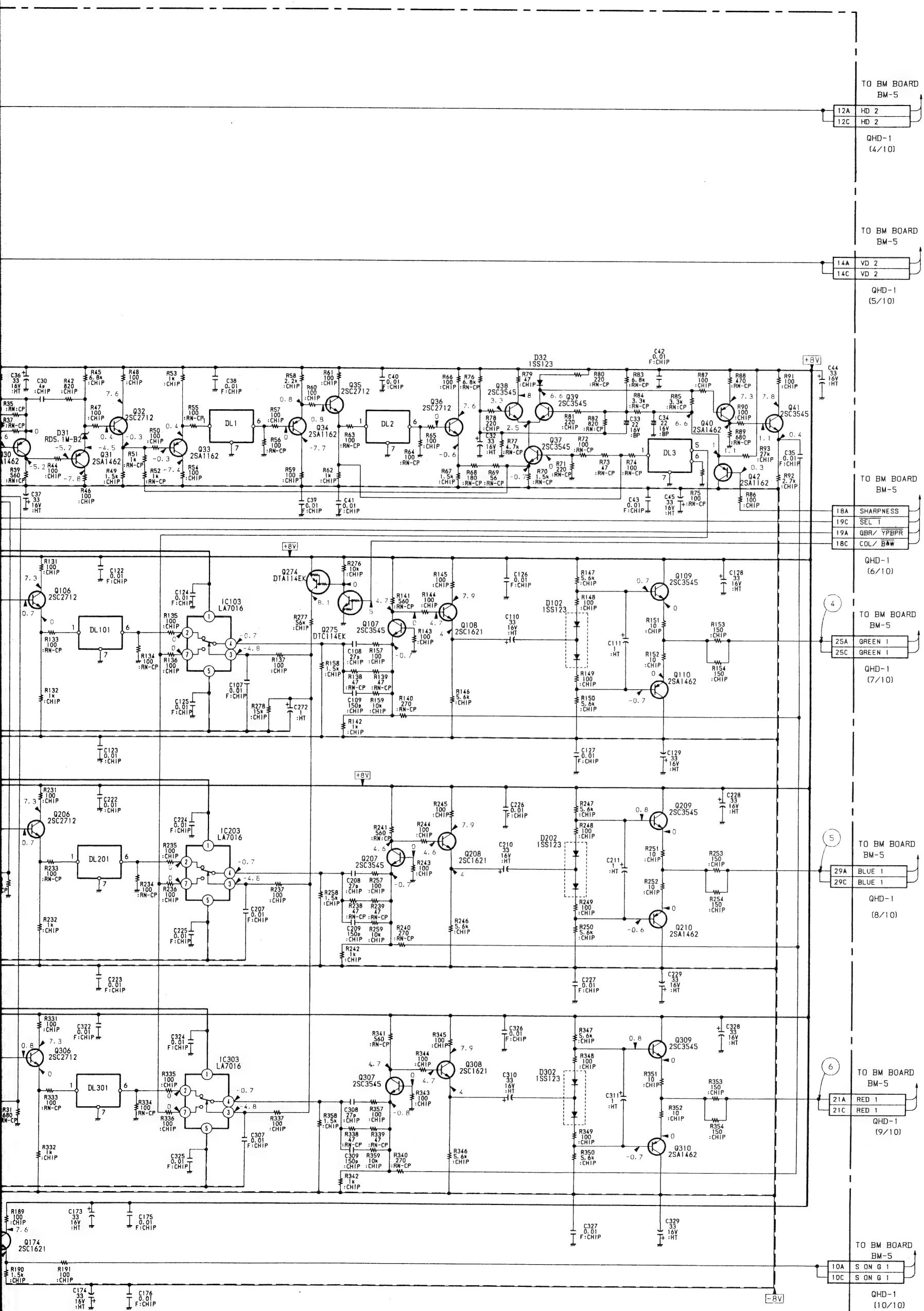
NOTE> VOLTAGE VALUES READING ARE TAKEN WHEN INPUTED "B-CH" ABOUT QHD BUAR



QHD (HDVS DECODER)

NOTE:- VOLTAGE VALUES READING ARE TAKEN WHEN INPUTTED "B-CH" ABOUT 3RD BOARD

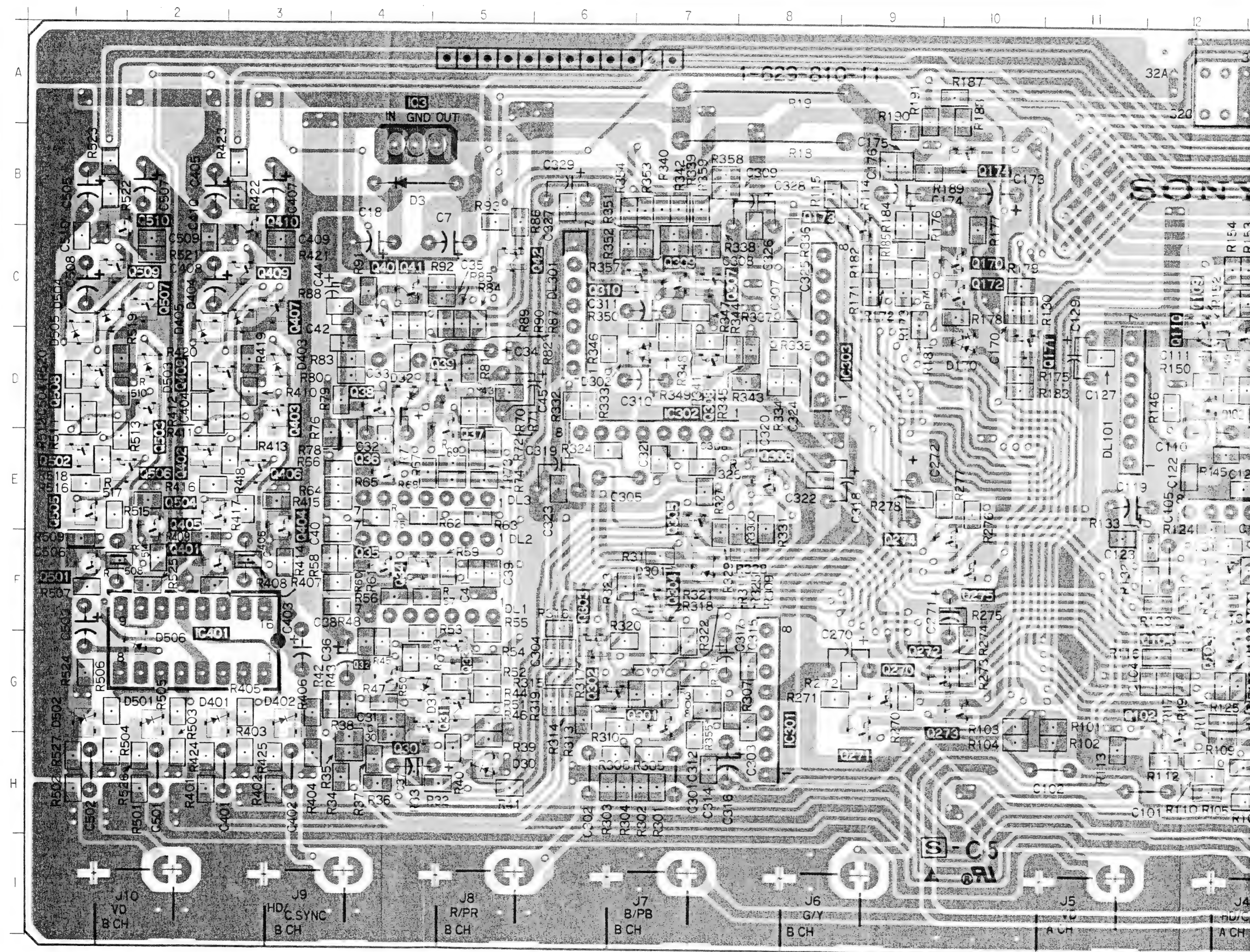
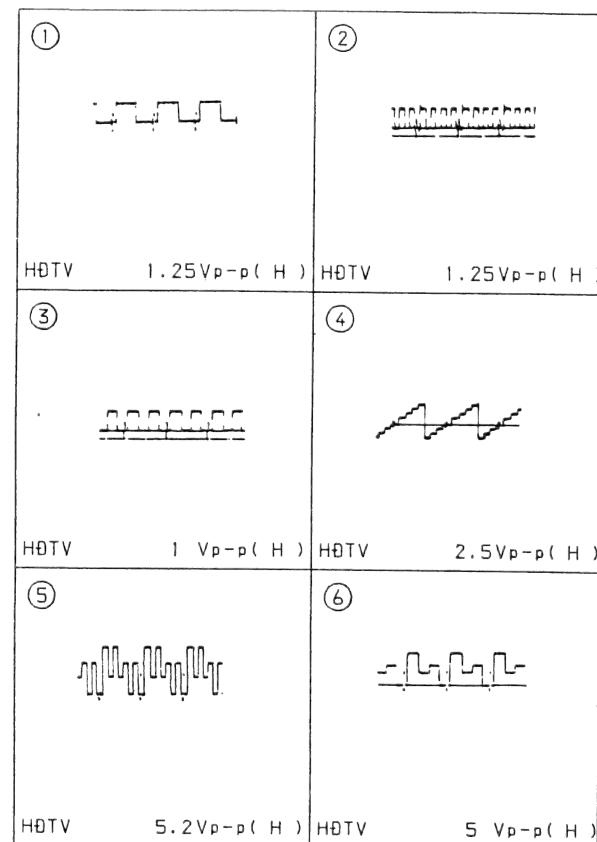


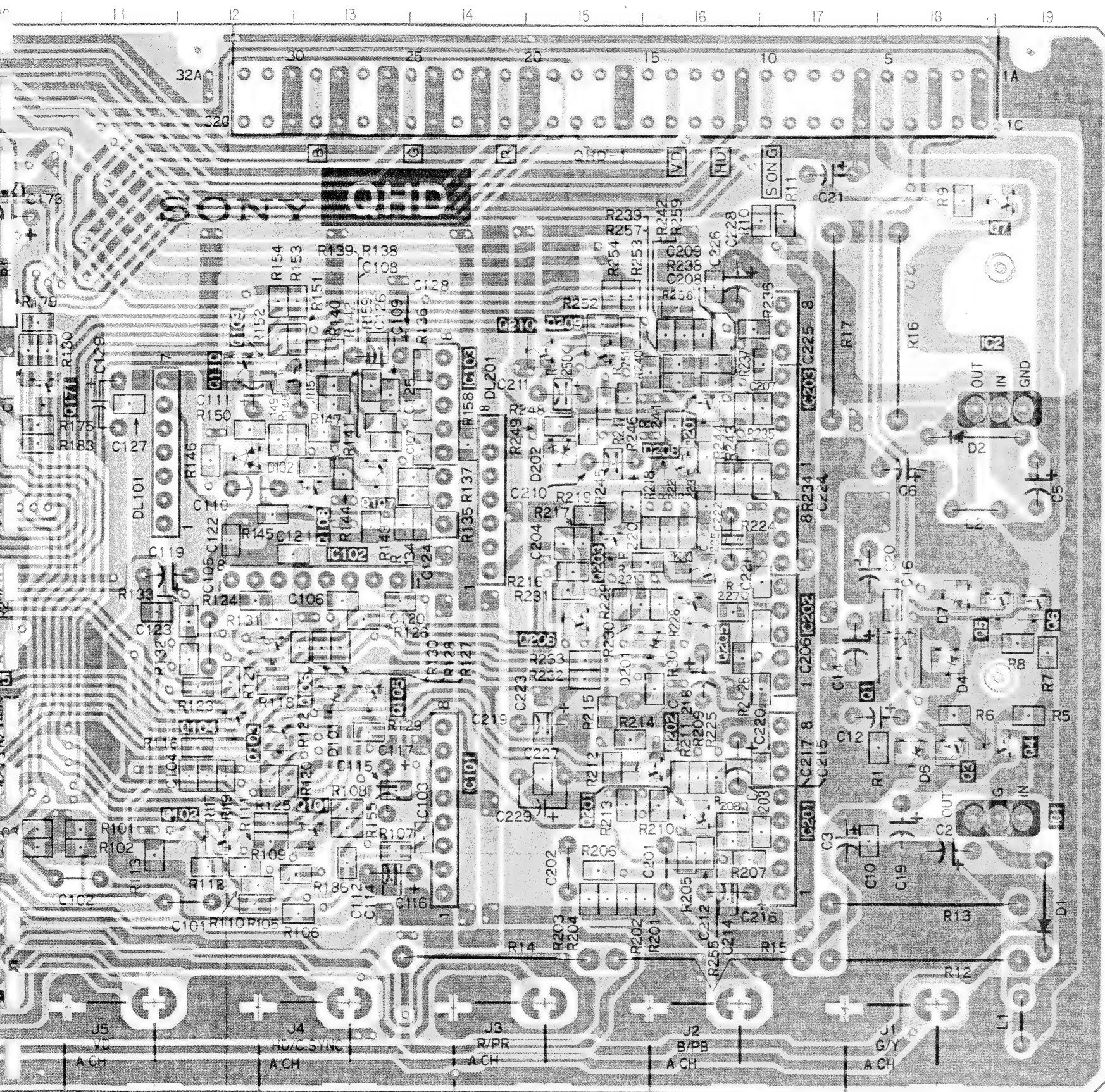


QHD

[HDVS DECODER]

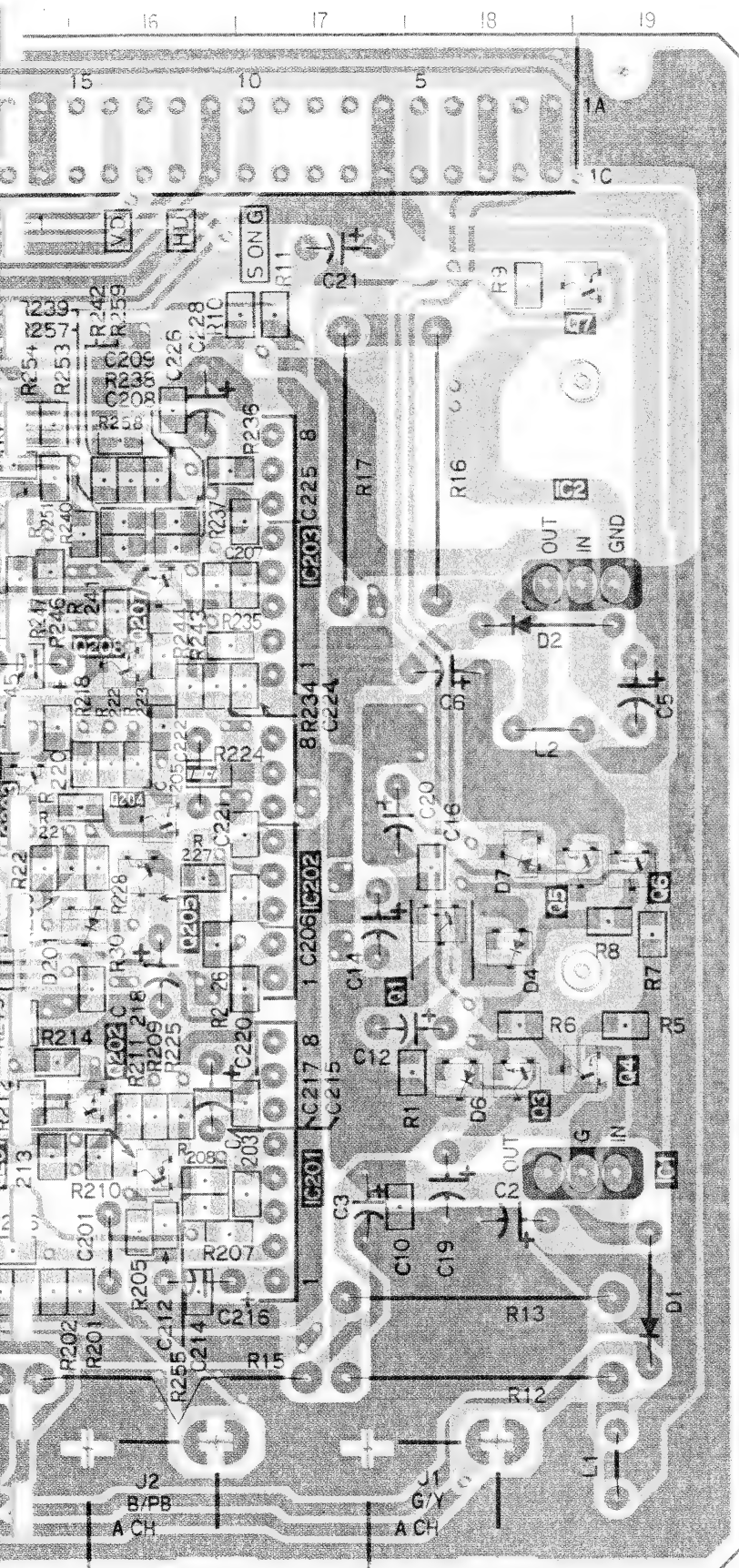
— QHD Board —

QHD BOARD WAVEFORMS




QHD BOARD

IC		Q107	D-13	Q410	C-3
IC1	G-19	Q108	D-13	Q501	F-1
IC2	D-19	Q109	C-12	Q502	E-1
IC3	B-4	Q110	C-12	Q503	D-2
IC101	G-14	Q170	C-10	Q504	E-2
IC102	E-13	Q171	D-10	Q505	E-1
IC103	D-14	Q172	C-10	Q506	E-2
IC201	G-17	Q173	B-9	Q507	C-2
IC202	F-17	Q174	B-10	Q508	D-1
IC203	D-17	Q201	G-16	Q509	C-1
IC301	G-8	Q202	G-16	Q510	C-1
IC302	D-7	Q203	E-15		
IC303	C-8	Q204	E-16		
IC401	G-2	Q205	F-16		
		Q206	F-15		
		Q207	D-16		
		Q208	D-16		
		Q209	C-15		
		Q210	C-15		
		Q270	G-9		
		Q271	G-9		
		Q272	G-10		
		Q273	G-10		
		Q274	F-10		
		Q275	F-10		
		Q301	G-7		
		Q302	G-6		
		Q303	G-6		
		Q304	F-7		
		Q305	E-7		
		Q306	E-8		
		Q307	C-7		
		Q308	D-7		
		Q309	C-7		
		Q310	C-7		
		Q401	F-2		
		Q402	E-2		
		Q403	D-3		
		Q404	E-3		
		Q405	E-2		
		Q406	E-3		
		Q407	C-3		
		Q408	D-2		
		Q409	C-3		
TRANSISTOR		DIODE			
Q1	F-18	D1	H-19		
Q3	G-18	D2	D-18		
Q4	G-19	D3	B-4		
Q5	E-19	D4	F-18		
Q6	E-19	D6	G-18		
Q7	B-19	D7	E-18		
Q30	H-4	D30	H-5		
Q31	G-5	D31	G-4		
Q32	G-4	D32	D-4		
Q33	G-5	D101	F-13		
Q34	F-4	D102	D-12		
Q35	F-4	D170	D-10		
Q36	E-4	D201	F-16		
Q37	D-5	D202	D-15		
Q38	D-4	D301	F-7		
Q39	D-5	D302	D-7		
Q40	C-4	D401	G-2		
Q41	C-4	D402	G-3		
Q42	C-5	D403	D-3		
Q101	G-13	D404	C-3		
Q102	G-12	D405	D-2		
Q103	G-12	D501	G-2		
Q104	F-12	D502	G-1		
Q105	F-13	D503	D-2		
Q106	F-12	D504	C-1		
		D505	D-1		
		D506	G-2		



QHD BOARD

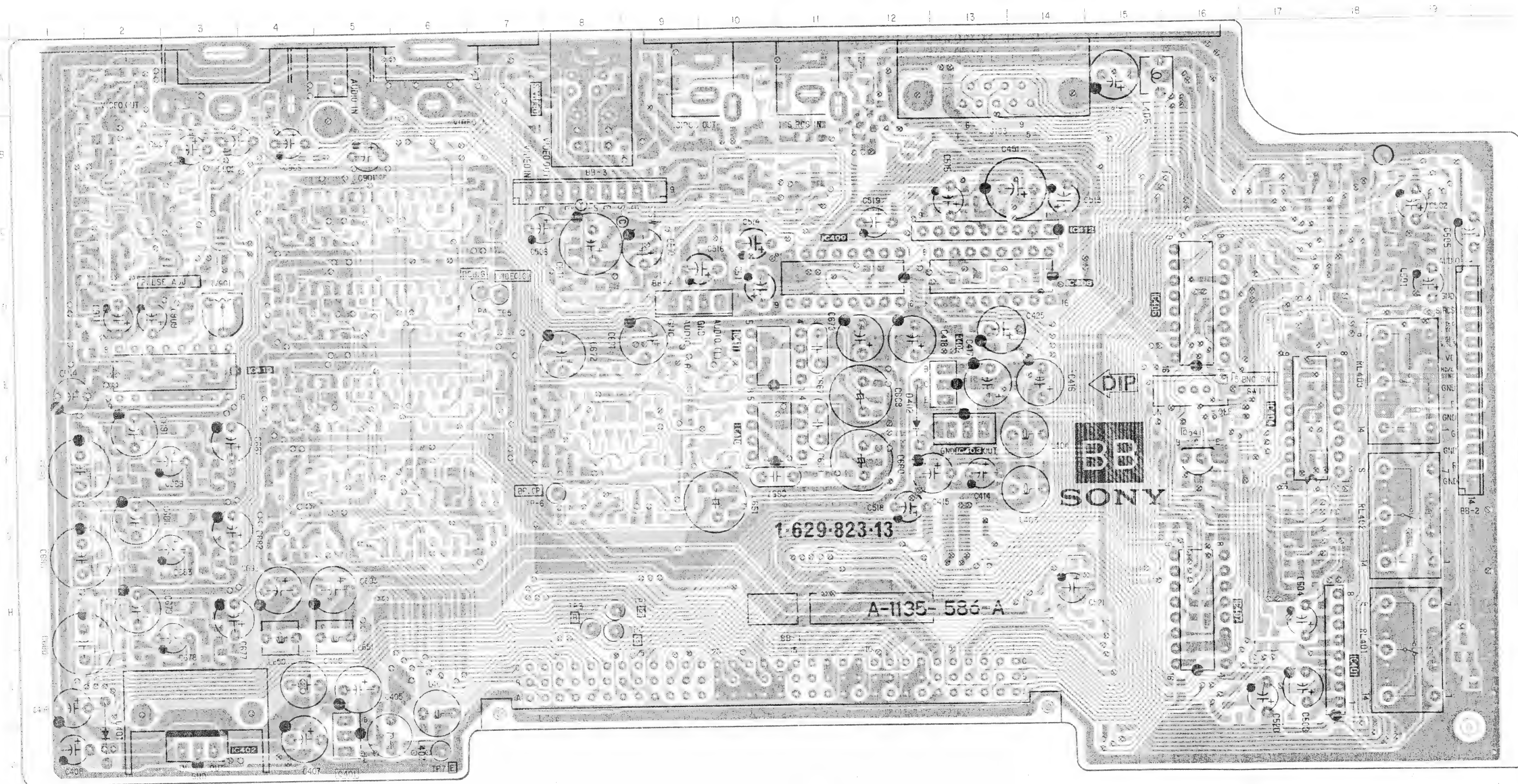
IC		Q107 D-13		Q410 C-3	
IC1	G-19	Q108	D-13	Q501	F-1
IC2	D-19	Q109	C-12	Q502	E-1
IC3	B-4	Q110	C-12	Q503	D-2
IC101	G-14	Q170	C-10	Q504	E-2
IC102	E-13	Q171	D-10	Q505	E-1
IC103	D-14	Q172	C-10	Q506	E-2
IC201	G-17	Q173	B-9	Q507	C-2
IC202	F-17	Q174	B-10	Q508	D-1
IC203	D-17	Q201	G-16	Q509	C-1
IC301	G-8	Q202	G-16	Q510	C-1
IC302	D-7	Q203	E-15		
IC303	C-8	Q204	E-16	DIODE	
IC401	G-2	Q205	F-16	D1	H-19
		Q206	F-15	D2	D-18
		Q207	D-16	D3	B-4
		Q208	D-16	D4	F-18
		Q209	C-15	D6	G-18
		Q210	C-15	D7	E-18
		Q270	G-9	D30	H-5
		Q271	G-9	D31	G-4
		Q272	G-10	D32	D-4
		Q273	G-10	D101	F-13
		Q274	F-10	D102	D-12
		Q275	F-10	D170	D-10
		Q301	G-7	D201	F-16
		Q302	G-6	D202	D-15
		Q303	G-6	D301	F-7
		Q304	F-7	D302	D-7
		Q305	E-7	D401	G-2
		Q306	E-8	D402	G-3
		Q307	C-7	D403	D-3
		Q308	D-7	D404	C-3
		Q309	C-7	D405	D-2
		Q310	C-7	D501	G-2
		Q401	F-2	D502	G-1
		Q402	E-2	D503	D-2
		Q403	D-3	D504	C-1
		Q404	E-3	D505	D-1
		Q405	E-2	D506	G-2
		Q406	E-3		
		Q407	C-3		
		Q408	D-2		
		Q409	C-3		

TRANSISTOR

Q1	F-18
Q3	G-18
Q4	G-19
Q5	E-19
Q6	E-19
Q7	B-19
Q30	H-4
Q31	G-5
Q32	G-4
Q33	G-5
Q34	F-4
Q35	F-4
Q36	E-4
Q37	D-5
Q38	D-4
Q39	D-5
Q40	C-4
Q41	C-4
Q42	C-5
Q101	G-13
Q102	G-12
Q103	G-12
Q104	F-12
Q105	F-13
Q106	F-12

BB SIGNAL SELECT
R.G.B. PRE AMP

— BB Board — (Component Side)

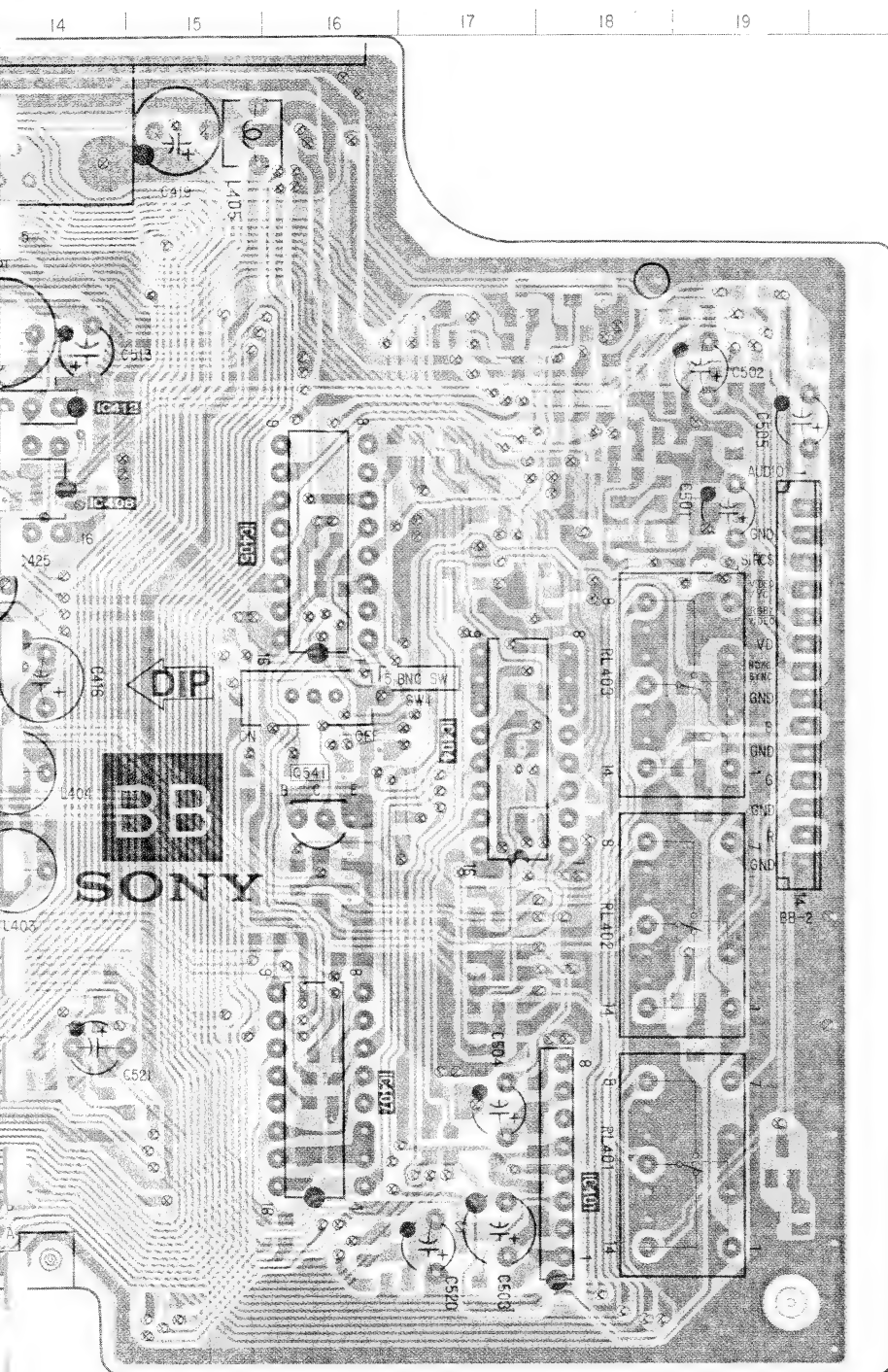


BB BOAF

IC	
CONDUCTOR	
SIDE	
IC401	I-3
IC402	J-18
IC403	F-8
IC404	F-3
IC405	D-5
IC407	H-5
IC408	D-8
IC409	D-9
IC410	F-10
IC411	E-10
IC412	C-7
IC413	E-18

TRANSIST	
CONDUCTOR	
SIDE	
Q401	J-16
Q402	E-8
Q450	A-9
Q451	B-9
Q452	A-10
Q453	A-10
Q454	B-11
Q456	A-12
Q457	B-9
Q501	D-3
Q502	D-3
Q503	C-3
Q504	C-3
Q505	J-3
Q506	H-4
Q507	G-4
Q508	G-4
Q509	F-3
Q510	D-4
Q511	D-4
Q512	C-4
Q513	D-4
Q514	D-4
Q515	C-4
Q516	C-4
Q517	C-4
Q518	C-4
Q519	C-4
Q520	A-4
Q521	B-4
Q522	G-4
Q523	H-4
Q524	J-4
Q525	F-4
Q526	F-4
Q527	D-4
Q528	B-4
Q529	B-4
Q530	C-4
Q531	C-4
Q537	F-4
Q538	F-4
Q539	F-4
Q540	G-4
Q541	F-4
Q542	F-4
Q550	F-4
Q551	F-4
Q552	G-15
Q553	G-15
Q554	G-14
Q555	G-15
Q556	G-15
Q557	F-15
Q558	F-15
Q559	F-15
Q560	G-15
Q561	G-15

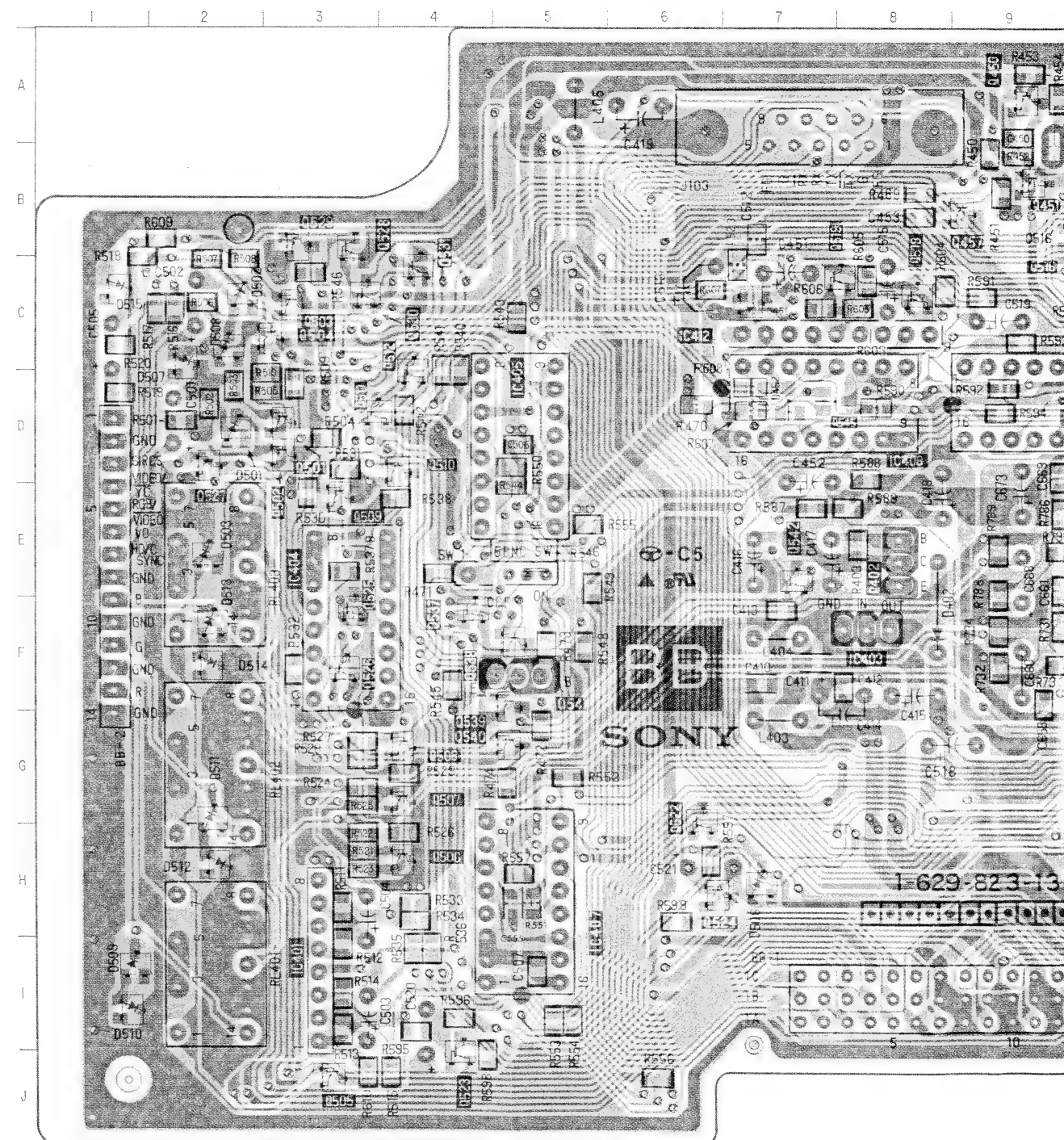
IAL SELECT
B. PRE AMP



BB BOARD

IC		CONDUCTOR COMPONENT SIDE		CONDUCTOR COMPONENT SIDE	
CONDUCTOR SIDE	COMPONENT SIDE	CONDUCTOR SIDE	COMPONENT SIDE	CONDUCTOR SIDE	COMPONENT SIDE
IC401 I-3	I-18	Q663 G-17		Q902 C-17	
IC402 J-18	J-3	Q664 G-16		Q903 A-17	
IC403 F-8	F-13	Q665 G-17		Q904 A-16	
IC404 F-3	F-17	Q666 G-12		Q905 A-19	
IC405 D-5	D-16	Q667 G-11		Q906 A-19	
IC407 H-5	H-16	Q668 F-12		Q907 B-18	
IC408 D-8	D-13	Q669 E-14		Q908 B-19	
IC409 D-9	D-11	Q670 E-14		Q909 B-19	
IC410 F-10	F-10	Q671 F-15		Q910 C-19	
IC411 E-10	E-10	Q672 F-15		Q911 C-18	
IC412 C-7	C-13	Q673 E-15		Q912 D-17	
IC413 E-18	E-3	Q674 E-15		Q913 C-18	
		Q675 E-15		Q914 D-18	
		Q676 E-16		Q915 D-18	
		Q677 F-15		Q916 C-18	
		Q678 E-16		Q917 C-19	
		Q679 E-16		Q918 C-19	
		Q680 F-17		Q919 E-19	
		Q681 F-16		Q920 E-19	
		Q682 H-18		Q921 E-19	
		Q683 H-18		Q922 D-19	
		Q684 I-18		Q923 D-19	
		Q685 I-19		Q924 C-19	
		Q686 H-19			
		Q687 D-14			
		Q688 D-14			
		Q689 D-15			
		Q690 D-15			
		Q691 D-14			
		Q692 D-15			
		Q693 D-15			
		Q694 D-16			
		Q695 D-15			
		Q696 D-16			
		Q697 D-16			
		Q698 D-17			
		Q699 D-16			
		Q700 G-18			
		Q701 G-18			
		Q702 G-18			
		Q703 G-18			
		Q704 G-19			
		Q705 G-19			
		Q706 B-14			
		Q707 C-14			
		Q708 C-15			
		Q709 C-15			
		Q710 C-15			
		Q711 C-15			
		Q712 C-15			
		Q713 C-16			
		Q714 C-15			
		Q715 C-16			
		Q716 C-16			
		Q717 C-17			
		Q718 C-16			
		Q719 F-18			
		Q720 F-18			
		Q721 F-18			
		Q722 F-19			
		Q723 F-19			
		Q724 F-11			
		Q725 F-11			
		Q726 F-12			
		Q727 F-11			
		Q728 F-12			
		Q729 F-13			
		Q730 F-12			
		Q731 E-13			
		Q732 F-12			
		Q733 F-13			
		Q734 E-12			
		Q735 E-13			
		Q736 E-11			
		Q737 E-11			
		Q738 E-11			
		Q739 F-13			
		Q740 E-12			
		Q901 C-17			
TRANSISTOR				DIODE	
CONDUCTOR SIDE	COMPONENT SIDE	CONDUCTOR SIDE	COMPONENT SIDE	CONDUCTOR SIDE	COMPONENT SIDE
Q401 J-16	J-5	D401 J-19		D401 J-19	
Q402 E-8	E-13	D402 F-8	F-12	D402 F-8	F-12
Q450 A-9		D450 B-10		D450 B-10	
Q451 B-9		D451 C-7		D451 C-7	
Q452 A-10		D452 D-2		D452 D-2	
Q453 A-10		D501 D-2		D501 D-2	
Q454 B-11		D502 C-2		D502 C-2	
Q456 A-12		D503 E-2		D503 E-2	
Q457 B-9		D504 C-11		D504 C-11	
Q501 D-3		D505 C-11		D505 C-11	
Q502 D-3		D506 H-7		D506 H-7	
Q503 C-3		D507 C-2		D507 C-2	
Q504 C-3		D508 C-2		D508 C-2	
Q505 J-3		D509 I-1		D509 I-1	
Q506 H-4		D510 I-1		D510 I-1	
Q507 G-4		D511 G-2		D511 G-2	
Q508 G-4		D512 H-2		D512 H-2	
Q509 E-3		D513 F-2		D513 F-2	
Q510 D-4		D514 F-2		D514 F-2	
Q511 D-4		D515 C-1		D515 C-1	
Q512 C-4		D516 B-10		D516 B-10	
Q513 D-13		D518 B-10		D518 B-10	
Q514 D-12		D520 B-11		D520 B-11	
Q515 C-12		D521 B-12		D521 B-12	
Q516 C-10		D522 C-13		D522 C-13	
Q517 C-11		D523 D-13		D523 D-13	
Q518 C-8		D550 G-12		D550 G-12	
Q519 C-8		D552 B-15		D552 B-15	
Q520 A-13		D553 B-15		D553 B-15	
Q521 B-13		D554 I-18		D554 I-18	
Q522 G-6		D555 G-18		D555 G-18	
Q523 J-4		D556 F-18		D556 F-18	
Q524 H-6		D901 B-18		D901 B-18	
Q525 F-3		D902 A-19		D902 A-19	
Q526 F-3		D903 B-18		D903 B-18	
Q527 D-2		D904 C-18		D904 C-18	
Q528 B-3		D905 D-18		D905 D-18	
Q529 B-3		D906 C-18		D906 C-18	
Q530 C-3					
Q531 C-4					
Q537 F-4					
Q538 F-5					
Q539 F-5					
Q540 G-5					
Q541 F-5					
Q542 E-7					
Q650 F-14					
Q651 F-15					
Q652 G-14					
Q653 G-15					
Q654 G-14					
Q655 G-15					
Q656 G-15					
Q657 F-15					
Q658 F-16					
Q659 F-16					
Q660 G-15					
Q661 G-16					

— BB Board — (Conductor Side)

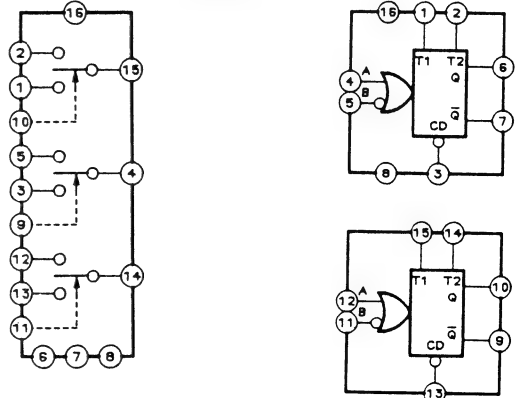


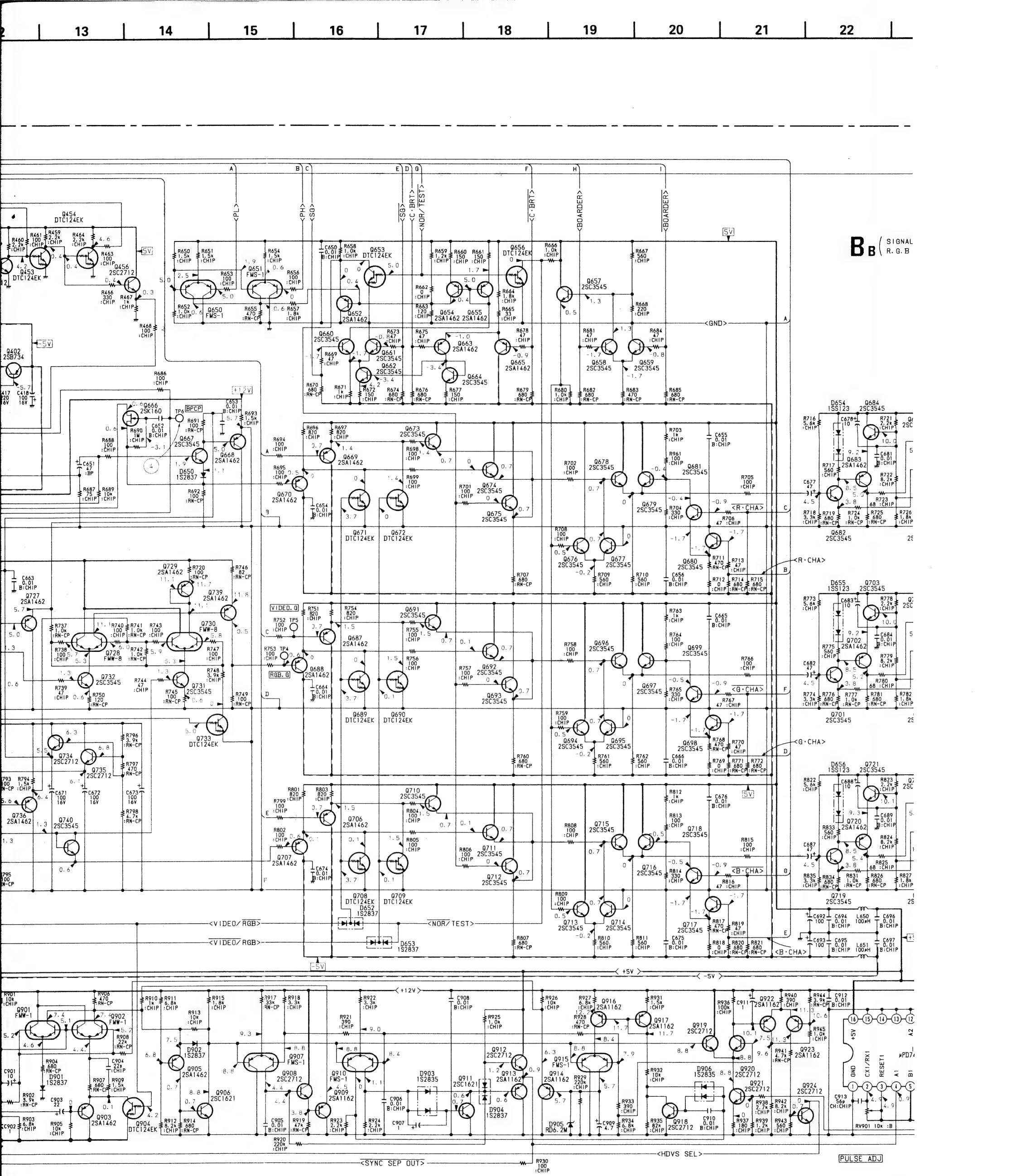
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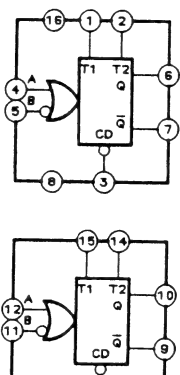
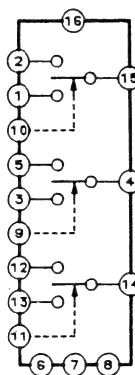
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-137-





BB BOARD IC404 HD14053BP BB BOARD IC413 μ PC74HC4538N

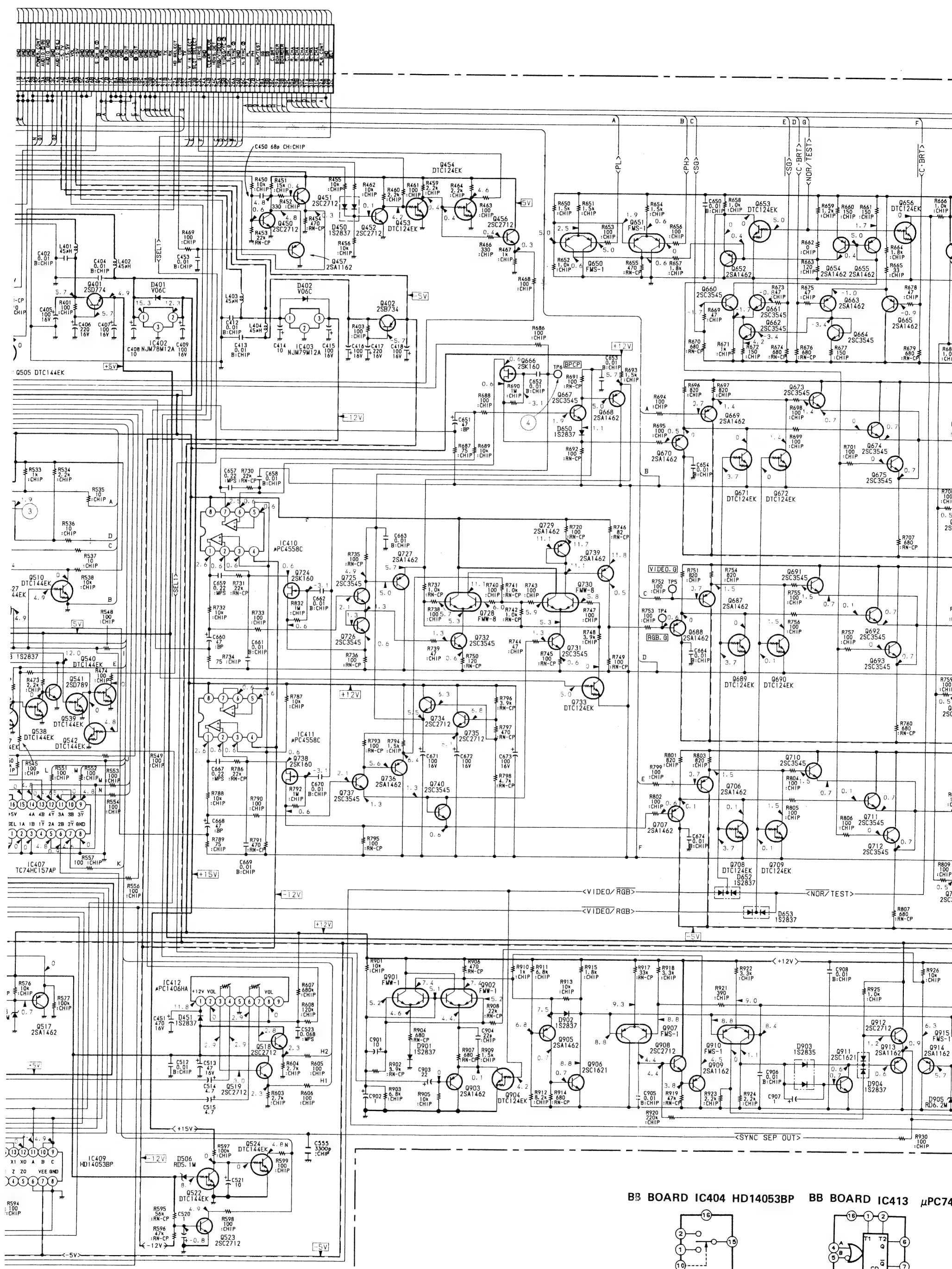


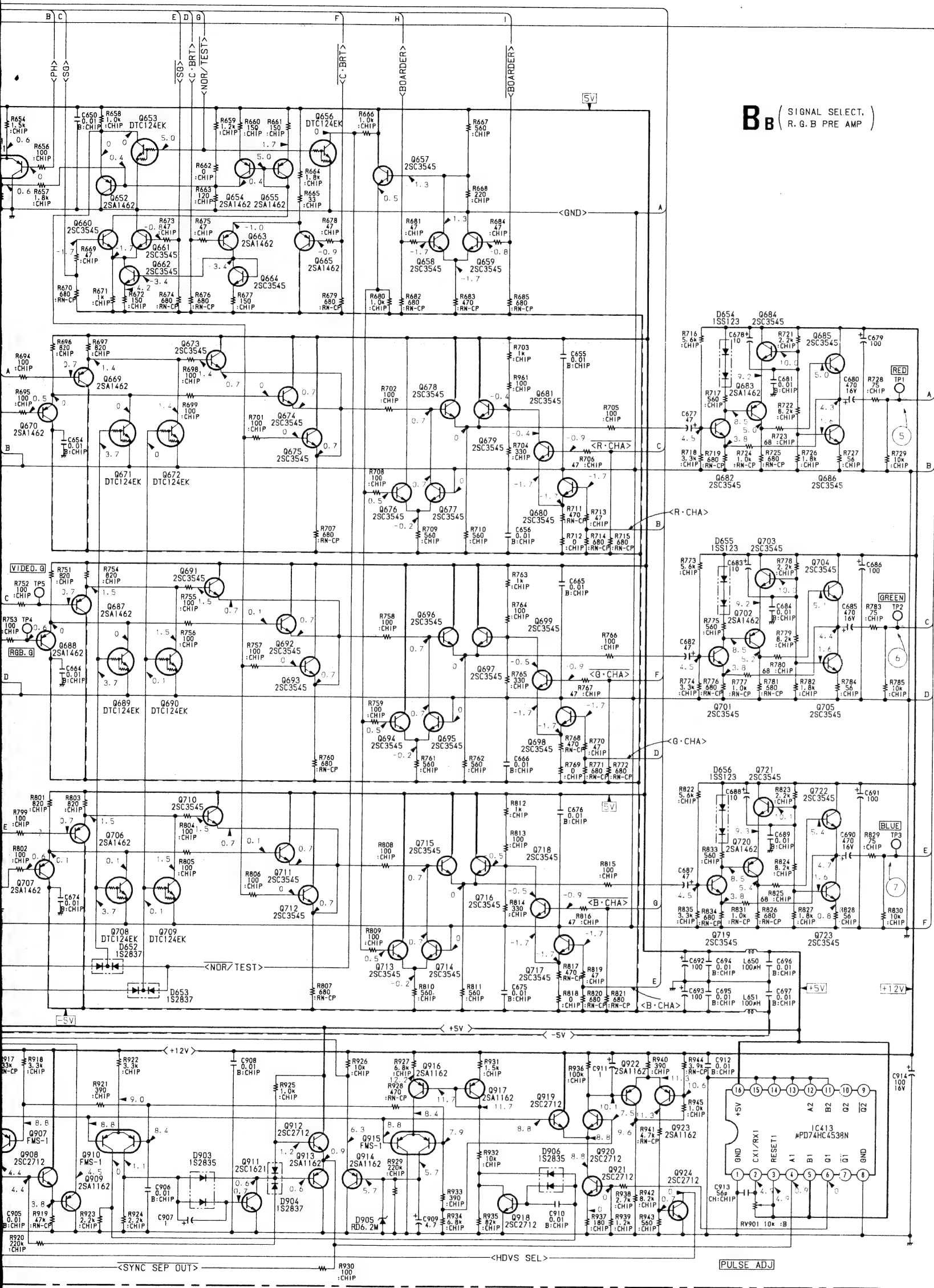
BB BOARD

IC	PIN No.	PAL, SECAM, NTSC3.58, NTSC4.43	S-VIDEO
IC404	①	0 V	1.7 V
	②	0.6	1.9
	③	0	1.4
	④	1.6	0
	⑤	2.1	0.6
IC408	⑥	1.3	2.7
	⑦	4.6	0
IC409	⑧	4.6	0
	⑨	4.6	0

BB BOAF

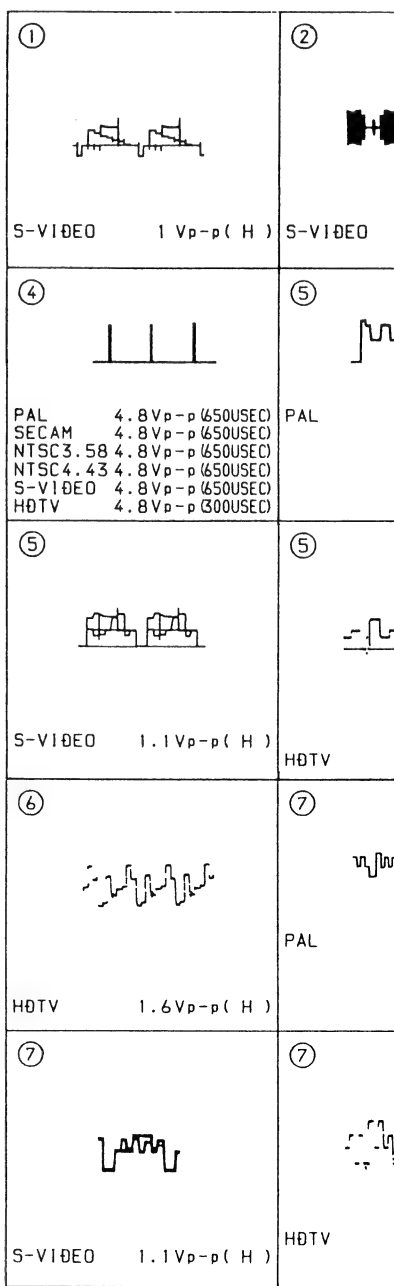
Q. No.	
Q509	B
Q516	B
	E
Q517	E
Q528	B
	C
Q529	B
	C
Q530	B
	C
Q531	B
	C



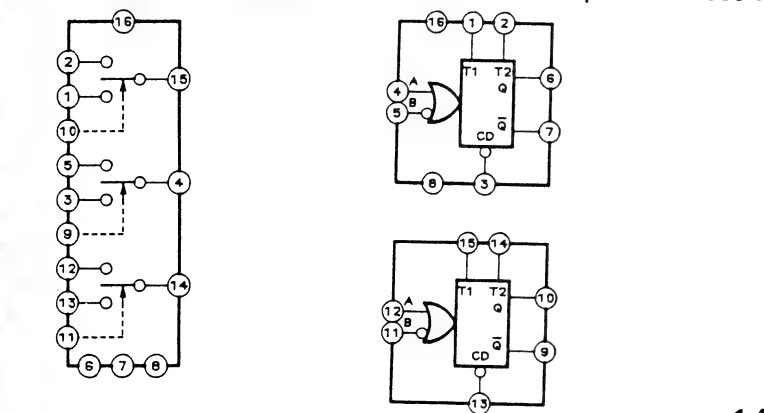


IC401	LA7016	SYNC G SW-1
402	NJM78M12A	+12V REG
403	NJM78M12A	-12V REG
404	HD14053BP	INPUT SW
405	TC74HC157AP	SYNC SW-1
407	TC74HC157AP	SYNC SW-2
408	HD14053BP	AUDIO SW-1
409	HD14053BP	AUDIO SW-2
410	μPC4558C	REF GEN-1
411	μPC4558C	REF GEN-2
412	μPC1406HA	AUDIO ATT
413	MC74HC4538N	SP GEN
Q401	2SD774	+5V REG
402	2SB734	-5V REG
450	2SC2712	SIRCS SW-1
451	2SC2712	SIRCS SW-2
452	2SC2712	SIRCS SW-3
453	DTIC124EK	SIRCS SW-4
454	DTIC124EK	SIRCS SW-5
456	2SC2712	SIRCS SW-6
457	2SA1162	SIRCS SW-7
501	2SC2712	HD SW-1
502	2SC2712	HD SW-2
503	2SC2712	VD SW-1
504	2SC2712	VD SW-2
505	DTIC144EK	SYNC G SW-2
506	2SA1462	R BUFF-1
507	2SA1462	G BUFF-1
508	2SA1462	B BUFF-1
509	2SA1462	VIDEO AMP-1
510	DTIC144EK	MODE SW-1
511	DTIC144EK	MODE SW-2
512	2SC2712	MODE SW-3
513	2SC2712	VIDEO AMP-1
514	2SC2712	VIDEO AMP-2
515	2SC2712	VIDEO AMP-2
516	2SA1462	Y BUFF-1
517	2SA1462	G BUFF-1
518	2SC2712	AUDIO R BUFF-1
519	2SC2712	AUDIO L BUFF-1
520	DTIC124EK	MODE SW-4
521	2SC2712	MODE SW-5
522	DTIC144EK	MODE SW-6
523	2SC2712	POW CONT-2
524	DTIC144EK	POW CONT-3
525	DTIC144EK	MODE SW-6
526	DTIC144EK	MODE SW-7
527	DTIC144EK	MODE SW-8
528	DTIC144EK	MODE SW-9
529	DTIC144EK	MODE SW-10
530	DTIC144EK	MODE SW-11
531	DTIC144EK	MODE SW-12
532	DTIC144EK	MODE SW-13
533	DTIC144EK	MODE SW-14
534	DTIC144EK	MODE SW-15
540	DTIC144EK	MODE SW-16
541	2SD789	MODE SW-17
542	DTIC144EK	MODE SW-18
650	FMS1	PL GEN-1
651	FMS1	PL GEN-2
652	2SA1462	TEST BUFF-1
653	DTIC124EK	NOR/TEST SW-1
654	2SA1462	SG SW-1
655	2SA1462	SG SW-2
656	DTIC124EK	NOR/TEST SW-2
657	2SC3545	BD SW-1
658	2SC3545	BD SW-2
659	2SC3545	BD SW-3
660	2SC3545	SG SW-3
661	2SC3545	SG SW-4

BB BOARD WAVEFORMS



BOARD IC404 HD14053BP BB BOARD IC413 μPC74HC4538N



BB BOARD

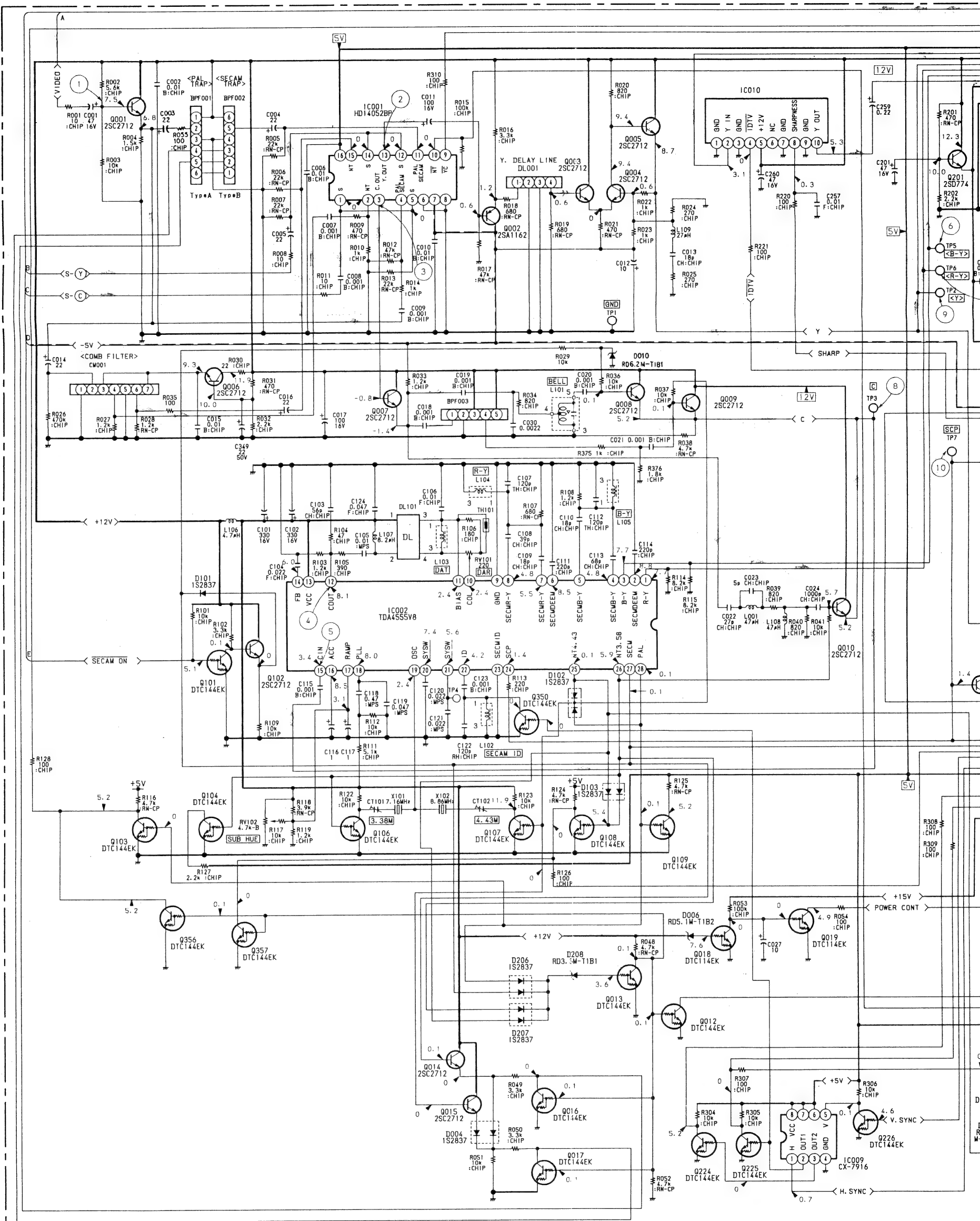
IC	PIN No.	PAL, SECAM, NTSC3.58, NTSC4.43	S-VIDEO
IC404	②	0 V	1.7 V
	④	0.6	1.9
	⑤	0	1.4
	⑩	1.6	0
	⑪	2.1	0.6
IC408	③	4.6	0
	④	4.6	0
IC409	③	4.6	0

BB BOARD

Q. No.	PAL, SECAM, NTSC3.58, NTSC4.43	S-VIDEO
Q509	B	0.8 V
Q516	B	0.6
	E	0
Q517	B	0
	E	4.9
Q528	C	0
	B	4.2
Q529	C	0
	B	4.2
Q530	B	4.9
	C	0
Q531	B	0
	C	1.7

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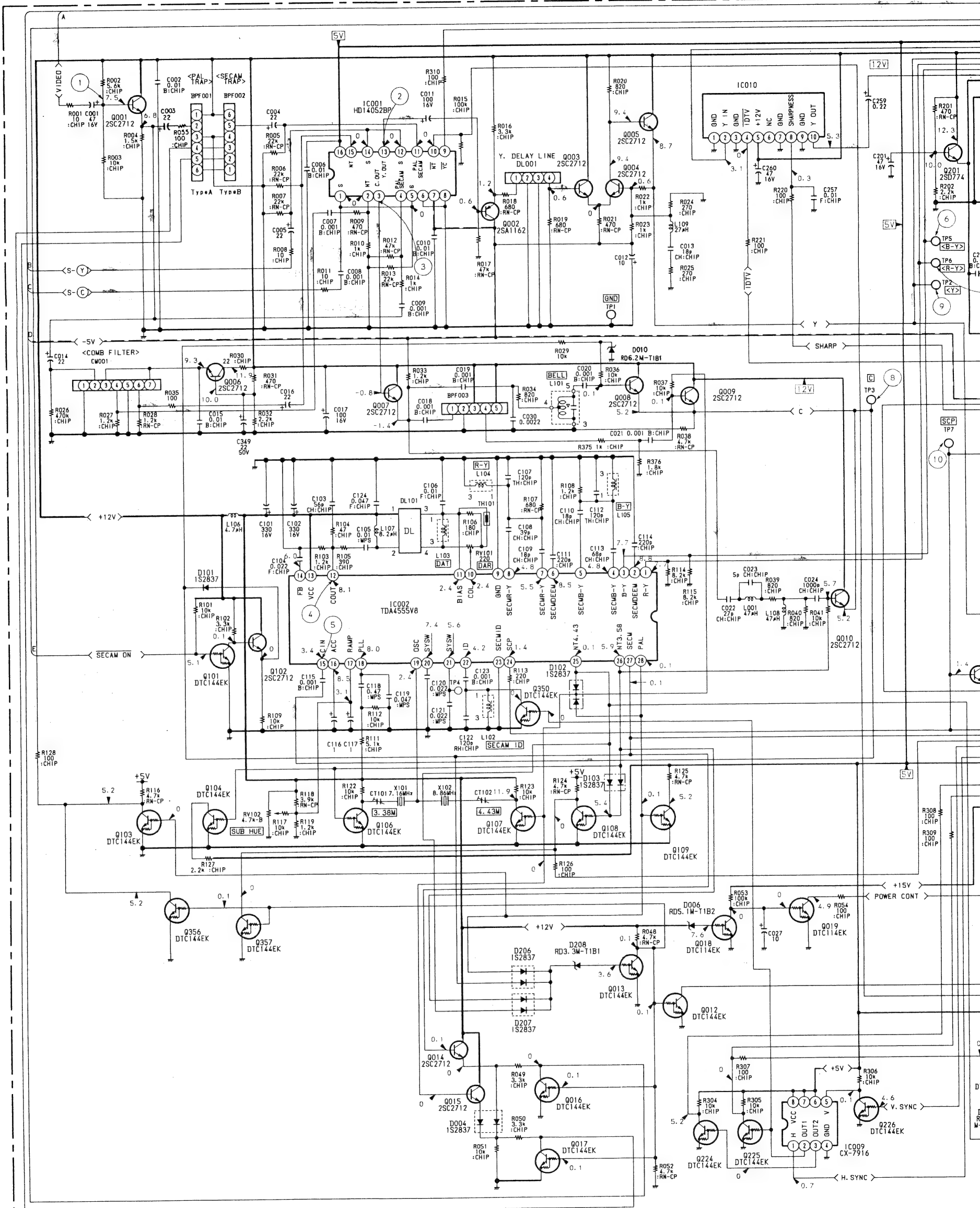
P	SYSTEM SW
B	DECORDER
	MATRIX
	JUNGLE
P	IDTV SW-1
7AP	IDTV SW-2
AP	IDTV SW-3
2A	12V REG
	50/60 DET
	SHARPNESS
C	LEVEL SHIFT
	VIDEO BUFF
	Y BUFF-1
	Y AMP-1
	Y AMP-2
	Y AMP-3
	9V REG-1
	C BUFF
	SECAM C BUFF
	PAL C BUFF
	NTSC C BUFF
	W/B SW-1
	W/B SW-2
	NT3.58 SW
	NT4.43 SW
	TRAP SW-1
	TRAP SW-2
	POW CONT-1
	POW CONT-2
	SECAM SW-1
	SECAM SW-2
	MODE SW-1
	MODE SW-2
	NT OSC SW
	PAL OSC SW
	MODE SW-3
	MODE SW-4
	9V REG-2
	B-Y BUFF-1
	R-Y BUFF-1
	AFC-1
	AFC-2
	SYNC BUFF
	V.SYNC SW-1
	V.SYNC SW-2
	V.SYNC SW-3
	V.SYNC SW-4
	H.SYNC SW
	Y.CLAMP-1
	Y.BUFF-2
	B-Y CLAMP
	R-Y CLAMP
	B-Y CLAMP
	B-Y BUFF-2
	CLAMP
	REF DC BUFF-1
	REF DC BUFF-2
	SCP BUFF
	+5V REG
	BGP SHIFT
	50/60 SW-1
	50/60 SW-2
	V.SYNC SW-5
	SYSTEM SW-1
	NT4.43 SW
	SYSTEM SW-2
	ID
	Y BUFF-3
	Y CLAMP-2
	BLK BUFF
	MODE SW-5
	MODE SW-6
	NT3.58 DET
	POW CONT
	SECAM SW
	MODE SW-1
	MODE SW-2
	+12V PROT
	SYNC SEP.
	H.SYNC SW
	BLK ADD
	W/B SW-2
	W/B SW-3
	W/B SW-1
	NT4.43 SW
	Y.CLAMP



Ba (4-STD DECODER)



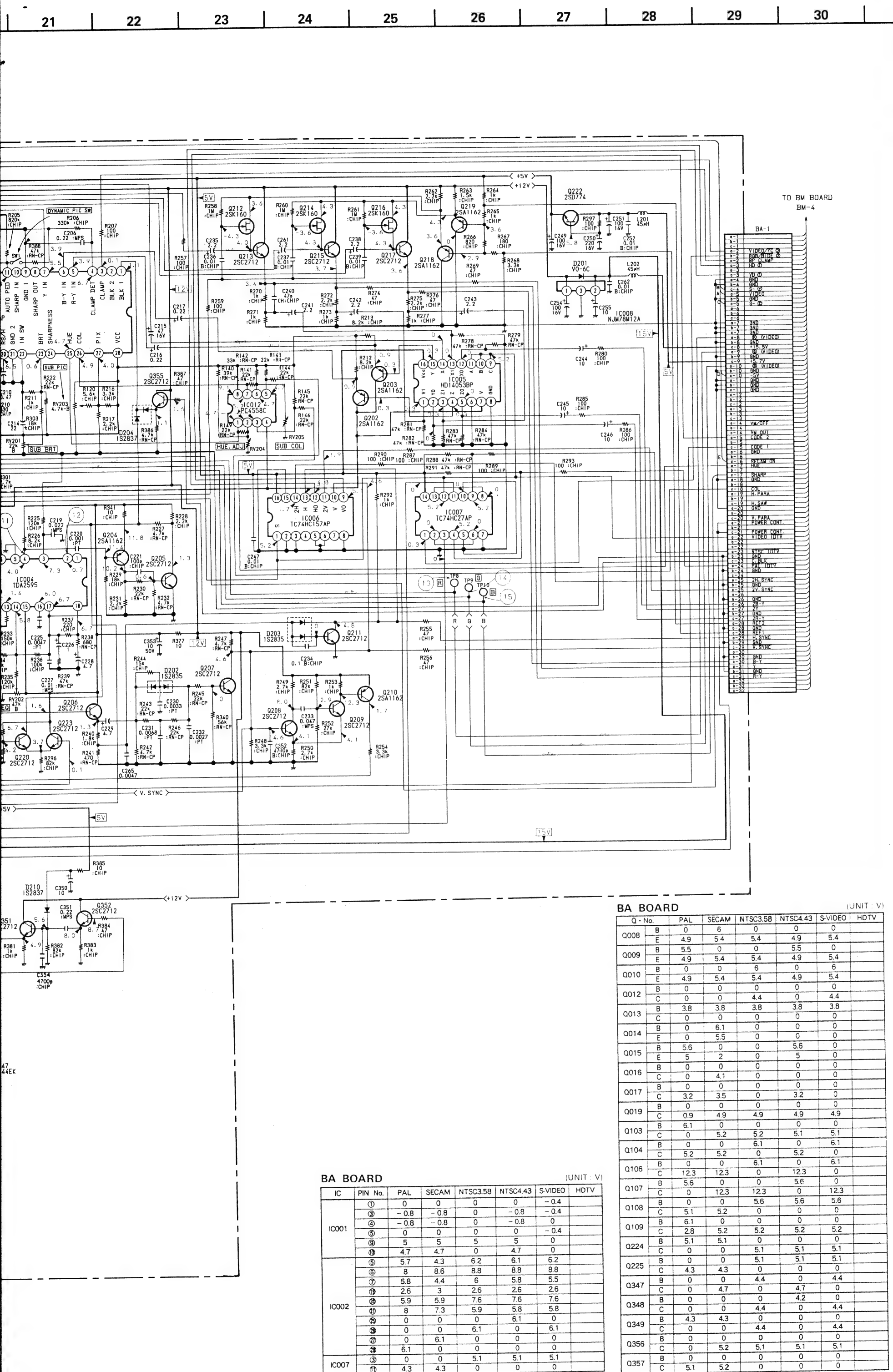
1 SW
DER
W-1
W-2
W-3
G
DET
VSS
SHIFT
BUFF
-1
1
2
3
-1
C BUFF
BUFF
-1
W-1
W-2
SW
SW
SW-1
SW-2
ONT-1
ONT-2
SW-1
SW-2
SW-2
SW
3C SW
SW-3
SW-4
-2
FF-1
FF-1
BUFF
SW-1
SW-2
SW-3
SW-4
SW
1P-1
-2
AMP
FF-2
AMP
FF-2
BUFF-1
BUFF-2
JFF
LEG
-IFT
SW-1
SW-2
SW-5
V SW-1
SW
V SW-2
F-3
MP-2
JFF
SW-5
SW-6
DET
ONT
1 SW
SW-1
SW-2
PROT
SEP.
SW
DD
SW-2
SW-3
SW-1
SW
AP



BA (4-STD DECODER)

(UNIT : V)

IC	PIN No.	PAL	SECAM	NTSC3.58	NTSC4.43	S-VIDEO	HDTV
IC001	①	0	0	0	0	-0.4	
	③	-0.8	-0.8	0	-0.8	-0.4	
	④	-0.8	-0.8	0	-0.8	0	
	⑤	0	0	0	0	-0.4	
	⑨	5	5	5	5	0	
	⑩	4.7	4.7	0	4.7	0	
IC002	⑤	5.7	4.3	6.2	6.1	6.2	
	⑥	8	8.6	8.8	8.8	8.8	
	⑦	5.8	4.4	6	5.8	5.5	
	⑩	2.6	3	2.6	2.6	2.6	
	⑫	5.9	5.9	7.6	7.6	7.6	
	⑭	8	7.3	5.9	5.8	5.8	
	⑮	0	0	0	6.1	0	
	⑯	0	0	6.1	0	6.1	
	⑰	0	6.1	0	0	0	
	⑱	6.1	0	0	0	0	
IC007	③	0	0	5.1	5.1	5.1	
	⑪	4.3	4.3	0	0	0	



BA BOARD (UNIT: V)

Q. No.	PAL	SECAM	NTSC3.58	NTSC4.43	S-VIDEO	HDTV
Q008	B 0	6	0	0	0	
	E 4.9	5.4	5.4	4.9	5.4	
Q009	B 5.5	0	0	5.5	0	
	E 4.9	5.4	5.4	4.9	5.4	
Q010	B 0	0	6	0	6	
	E 4.9	5.4	5.4	4.9	5.4	
Q012	B 0	0	0	0	0	
	C 0	0	4.4	0	4.4	
Q013	B 3.8	3.8	3.8	3.8	3.8	
	C 0	0	0	0	0	
Q014	B 0	6.1	0	0	0	
	E 0	5.5	0	0	0	
Q015	B 5.6	0	0	5.6	0	
	E 5	2	0	5	0	
Q016	B 0	0	0	0	0	
	C 0	4.1	0	0	0	
Q017	B 0	0	0	0	0	
	C 3.2	3.5	0	3.2	0	
Q019	B 0	0	0	0	0	
	C 0.9	4.9	4.9	4.9	4.9	
Q103	B 6.1	0	0	0	0	
	C 0	5.2	5.2	5.1	5.1	
Q104	B 0	0	6.1	0	6.1	
	C 5.2	5.2	0	5.2	0	
Q106	B 0	0	6.1	0	6.1	
	C 12.3	12.3	0	12.3	0	
Q107	B 5.6	0	0	5.6	0	
	C 0	12.3	12.3	0	12.3	
Q108	B 0	0	5.6	5.6	5.6	
	C 5.1	5.2	0	0	0	
Q109	B 6.1	0	0	0	0	
	C 2.8	5.2	5.2	5.2	5.2	
Q224	B 5.1	5.1	0	0	0	
	C 0	0	5.1	5.1	5.1	
Q225	B 0	0	5.1	5.1	5.1	
	C 4.3	4.3	0	0	0	
Q347	B 0	0	4.4	0	4.4	
	C 0	4.7	0	4.7	0	
Q348	B 0	0	0	4.2	0	
	C 0	0	4.4	0	4.4	
Q349	B 4.3	4.3	0	0	0	
	C 0	0	4.4	0	4.4	
Q356	B 0	0	0	0	0	
	C 0	5.2	5.1	5.1	5.1	
Q357	B 0	0	0	0	0	
	C 5.1	5.2	0	0	0	

BA BOARD (UNIT: V)

IC	PIN No.	PAL	SECAM	NTSC3.58	NTSC4.43	S-VIDEO	HDTV
IC001	①	0	0	0	0	-0.4	
	②	-0.8	-0.8	0	-0.8	-0.4	
	③	-0.8	-0.8	0	-0.8	-0.4	
	④	0	0	0	0	-0.4	
	⑤	5	5	5	5	0	
IC002	⑥	4.7	4.7	0	4.7	0	
	⑦	5.7	4.3	6.2	6.1	6.2	
	⑧	8	8.6	8.8	8.8	8.8	
	⑨	5.8	4.4	6	5.8	5.5	
	⑩	2.6	3	2.6	2.6	2.6	
	⑪	5.9	5.9	7.6	7.6	7.6	
	⑫	8	7.3	5.9	5.8	5.8	
	⑬	0	0	0	6.1	0	
	⑭	0	0	6.1	0	6.1	
	⑮	0	6.1	0	0	0	
IC007	①	0	0	5.1	5.1	5.1	
	②	4.3	4.3	0	0	0	

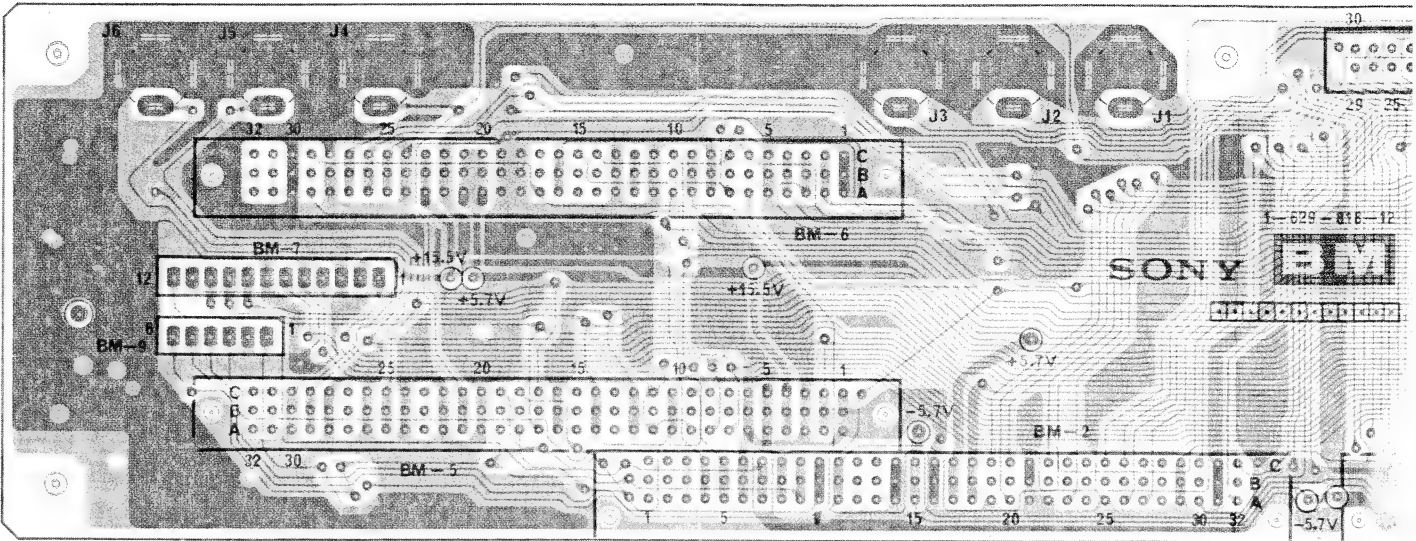
[4-STD DECODER]

BA BOARD

IC		Q213	F - 1
		Q214	G - 1
IC1	H - 5	Q215	G - 1
IC2	C - 4	Q216	H - 1
IC3	C - 15	Q217	H - 1
IC4	C - 10	Q218	I - 19
IC5	D - 18	Q219	I - 19
IC6	C - 18	Q220	C - 1
IC7	B - 18	Q221	B - 9
IC8	F - 11	Q222	F - 1
IC9	C - 16	Q223	B - 1
IC10	D - 12	Q224	C - 1
IC12	G - 15	Q225	C - 1
TRANSISTOR		Q226	C - 1
		Q347	H - 4
Q1	I - 5	Q348	H - 3
Q2	H - 6	Q349	H - 3
Q3	E - 5	Q350	B - 5
Q4	E - 6	Q351	F - 1
Q5	E - 6	Q352	G - 1
Q6	F - 4	Q355	B - 1
Q7	F - 7	Q356	C - 6
Q8	F - 5	Q357	C - 6
Q9	G - 5	DIODE	
Q10	A - 7		
Q12	F - 9	D4	D - 8
Q13	D - 8	D6	F - 9
Q14	D - 9	D101	G - 8
Q15	D - 8	D102	B - 6
Q16	E - 9	D103	C - 6
Q17	E - 9	D201	F - 1
Q18	G - 9	D202	C - 9
Q19	G - 8	D203	D - 1
Q101	G - 8	D204	B - 1
Q102	G - 8	D206	C - 7
Q103	C - 7	D207	C - 6
Q104	C - 6	D208	C - 5
Q106	A - 3	D209	G - 3
Q107	A - 4	D210	G - 1
Q108	C - 6	VARIABLE RESISTOR	
Q109	B - 8		
Q201	C - 14	CT101	A - 3
Q202	D - 17	CT102	A - 4
Q203	D - 16	RV101	D - 5
Q204	D - 11	RV102	C - 3
Q205	D - 11	RV201	D - 1
Q206	E - 10	RV202	B - 1
Q207	B - 9	RV203	B - 1
Q208	C - 8	RV204	H - 1
Q209	B - 8	RV205	H - 1
Q210	B - 8		
Q211	D - 10		
Q212	G - 19		

Bm

— BM Board —



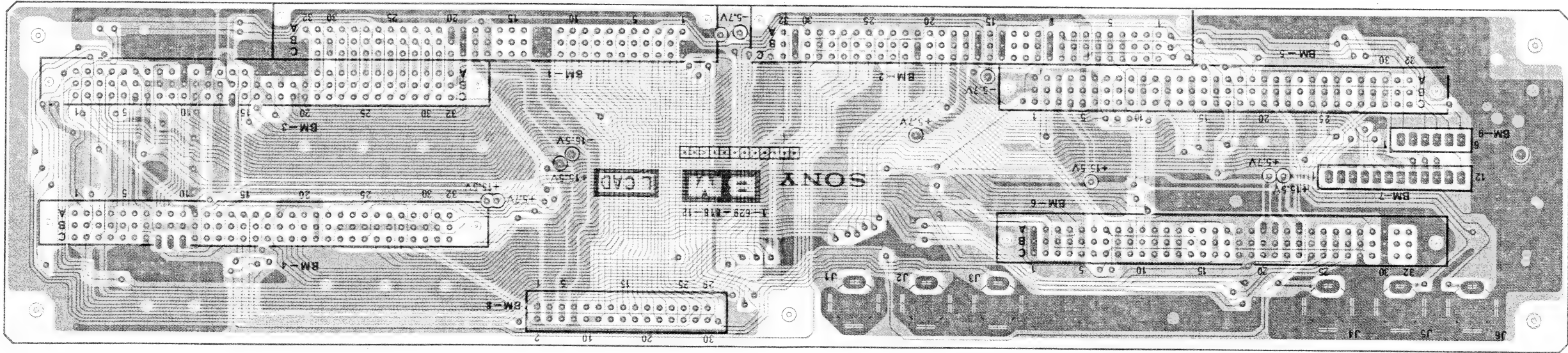
HDIH-1200M
RM-1200

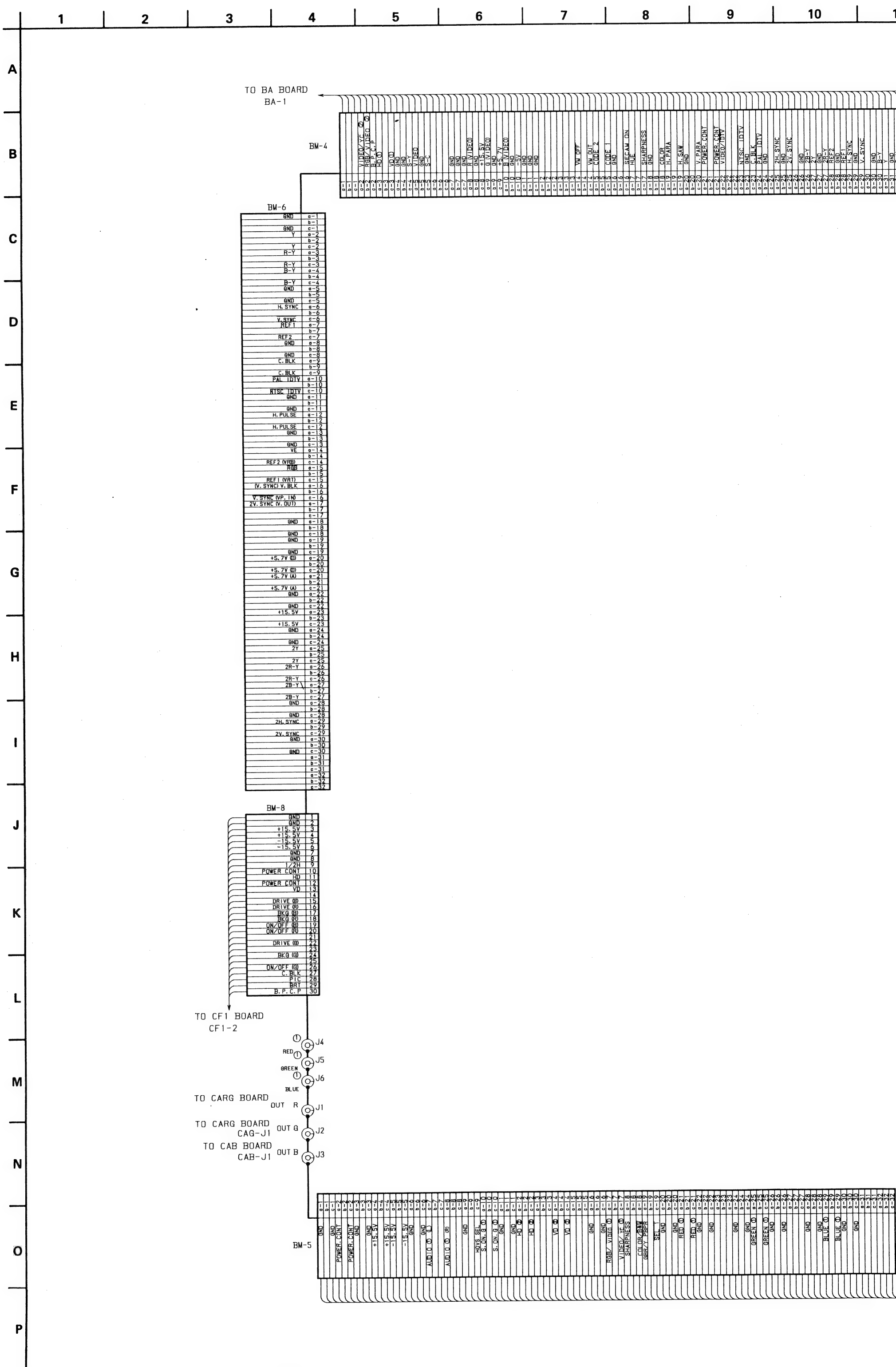
HDIH-1200M
RM-1200

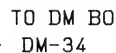
BM

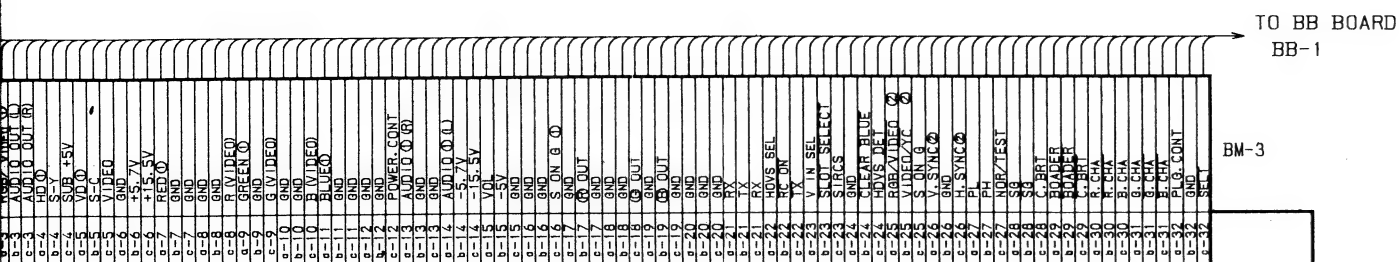
[DEFLECTION MOTHER BOARD]

— BM Board —

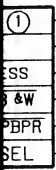








B M



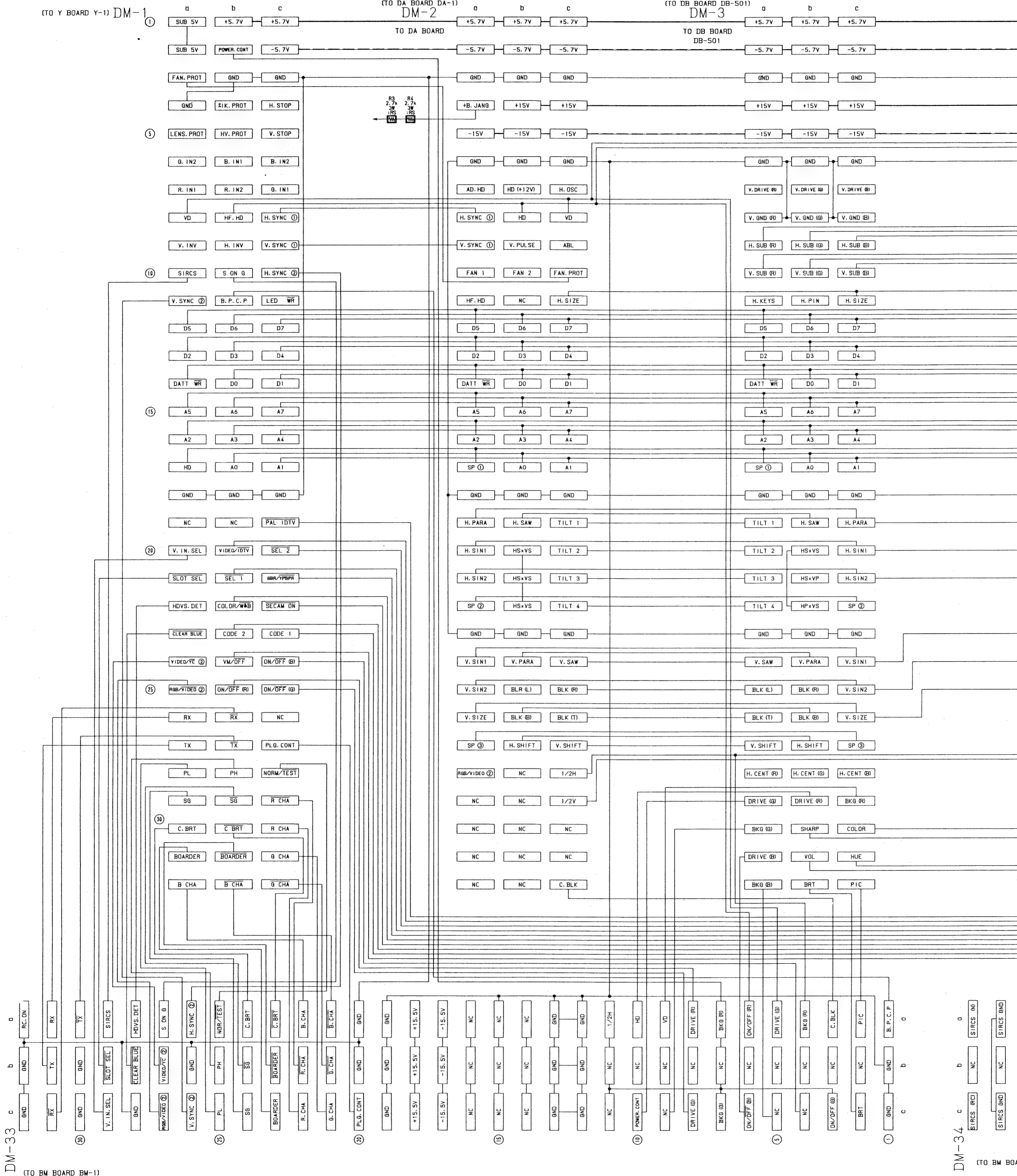
TO QM BOARD
QM-6

ARD

(TO Y BOARD Y-1) DM-1

(TO DA BOARD DA-1) DM-2

(TO DB BOARD DB-S01) DM-3

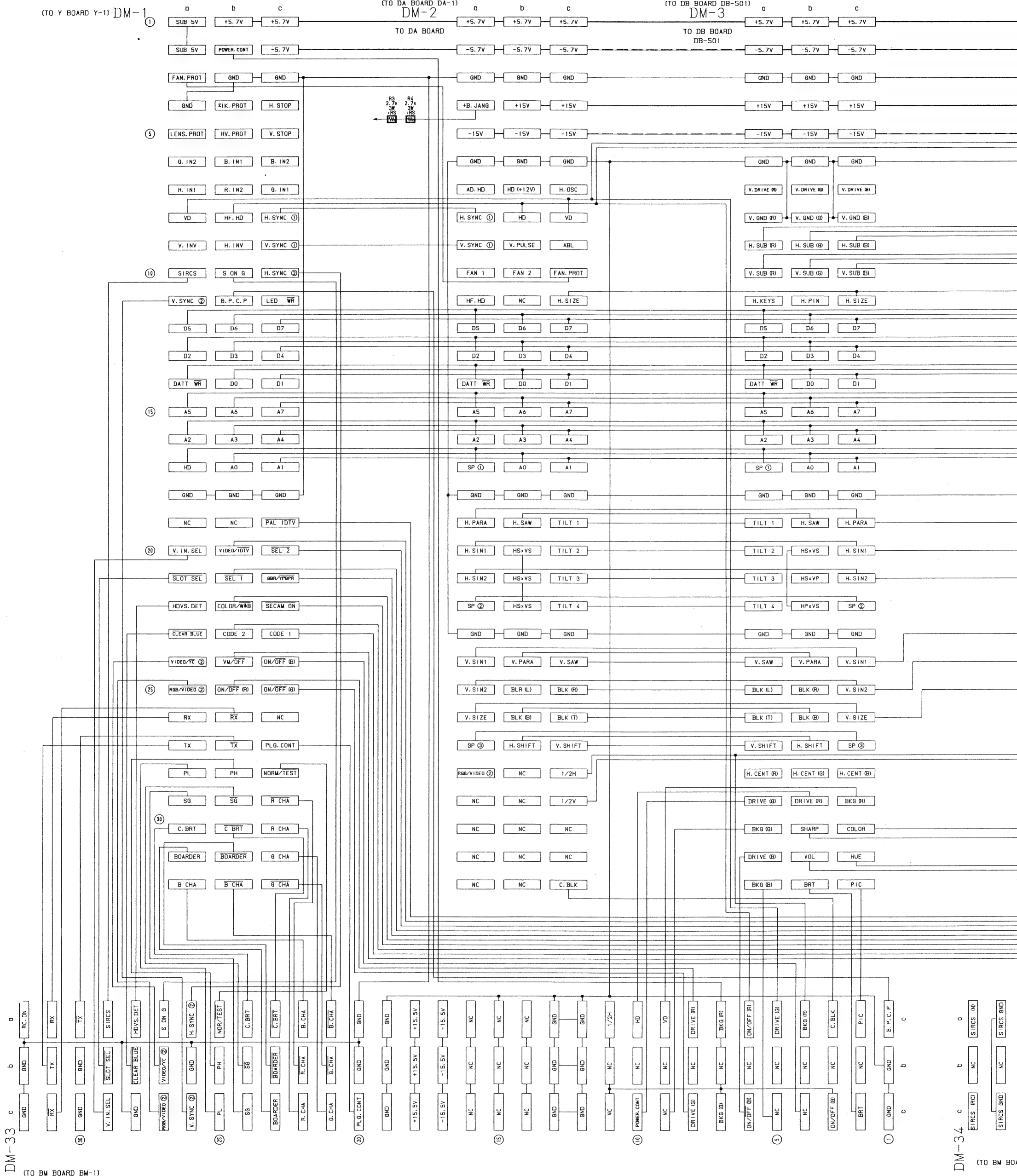


DM (DEFLECTION MOTHER BOARD)

(TO Y BOARD Y-1) DM-1

(TO DA BOARD DA-1) DM-2

(TO DB BOARD DB-501) DM-3



(TO DB BOARD DB-501)

DM-3

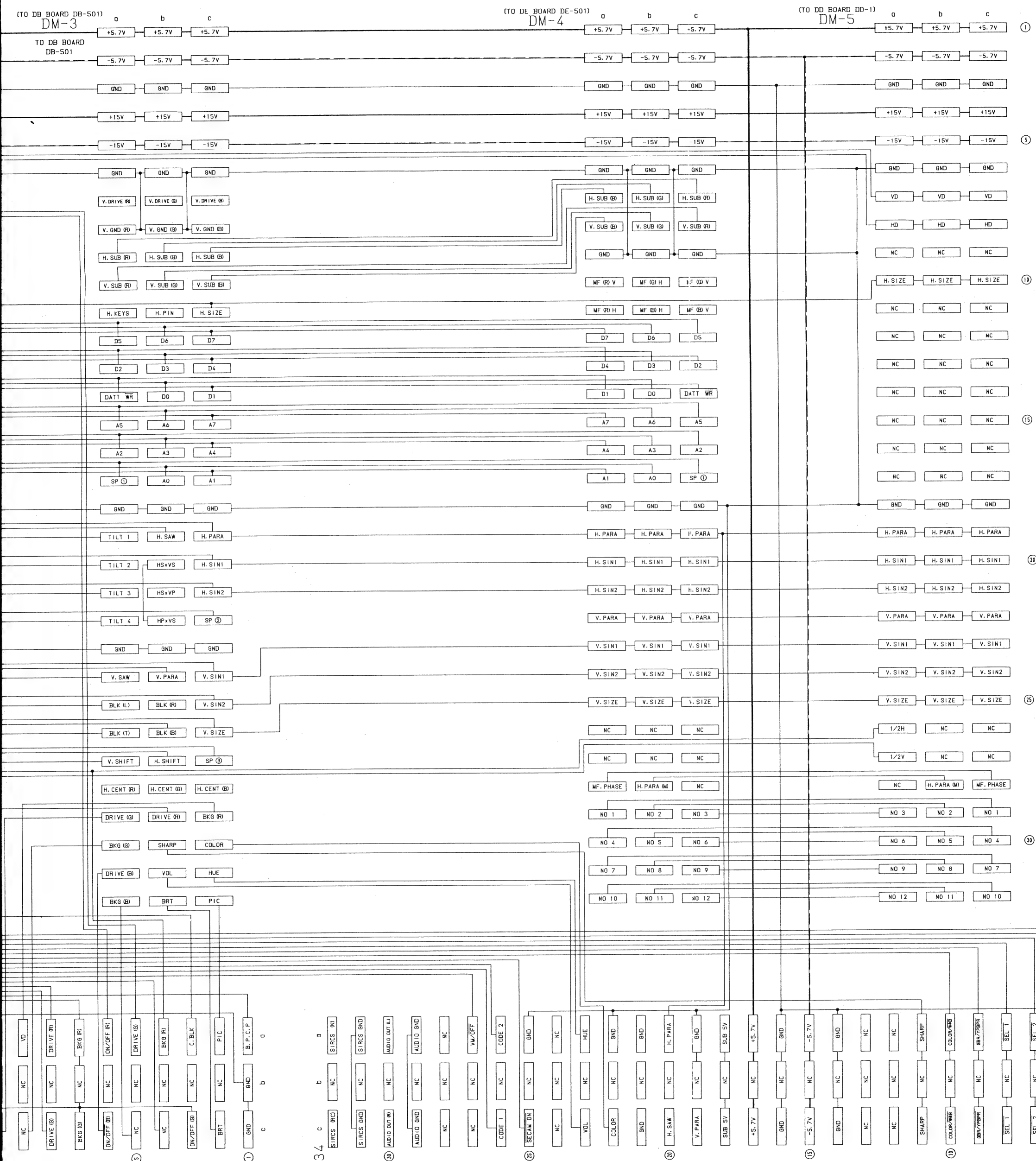
TO DB BOARD
DB-501

(TO DE BOARD DE-501)

DM-4

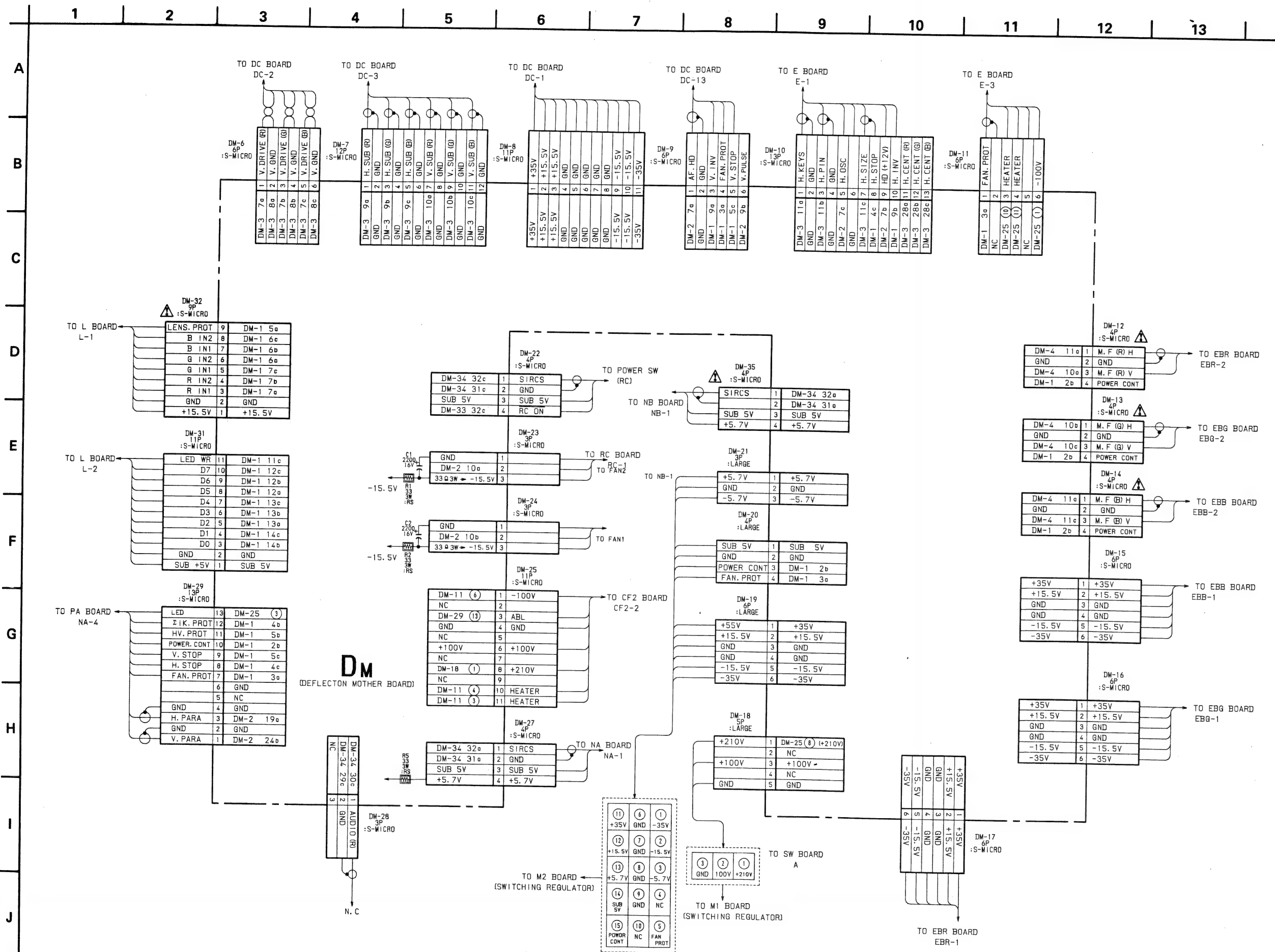
(TO DD BOARD DD-1)

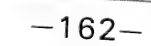
DM-5



DM-34

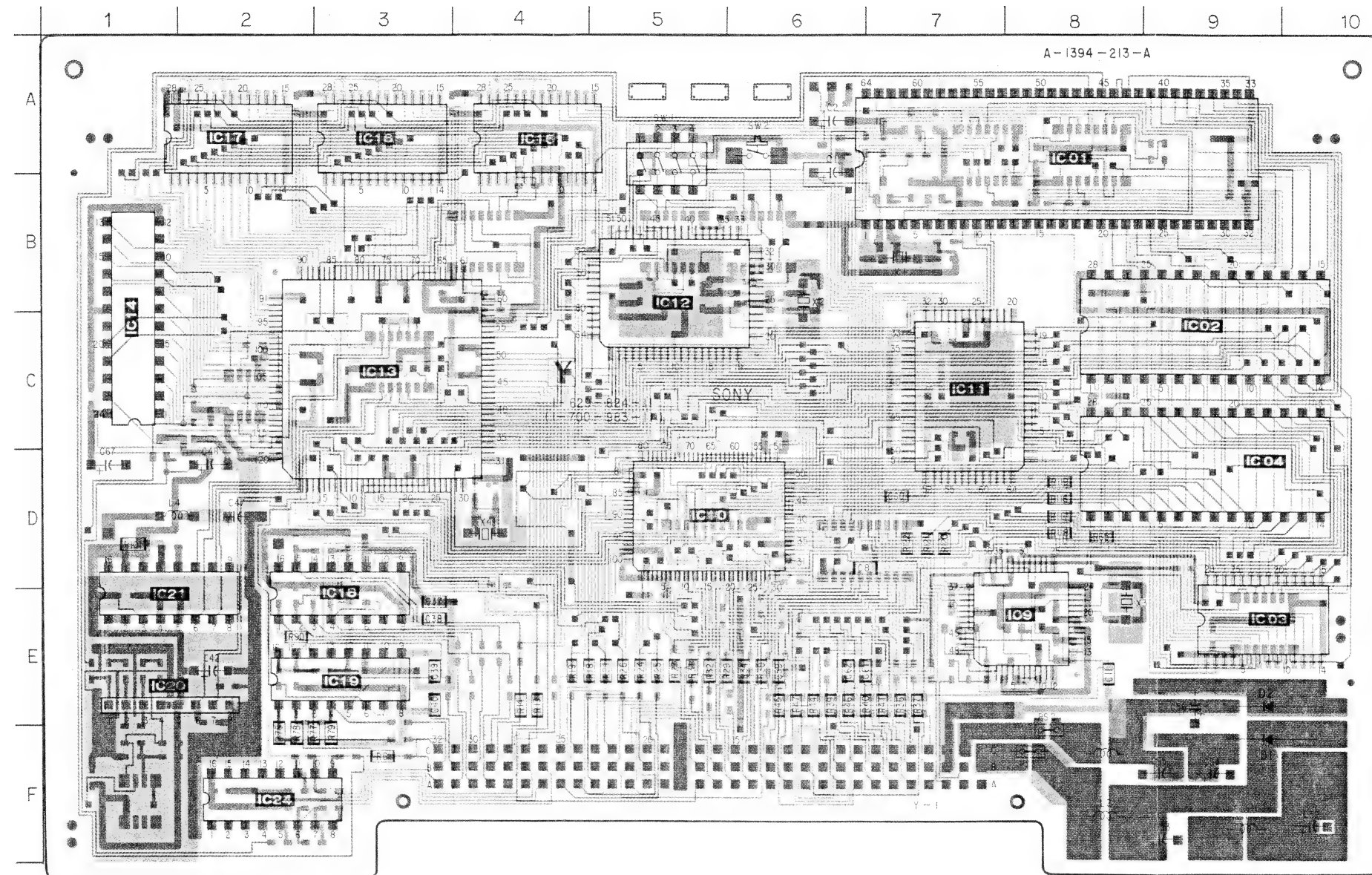
(TO BM BOARD BM-2)





Y [CPU MEMORY]

— Y Board — (Component Side)



IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC14
IC15
IC16
IC17
IC18
IC19
IC20
IC21
IC22
IC23
IC24
IC25
IC26
IC27
IC28
IC29

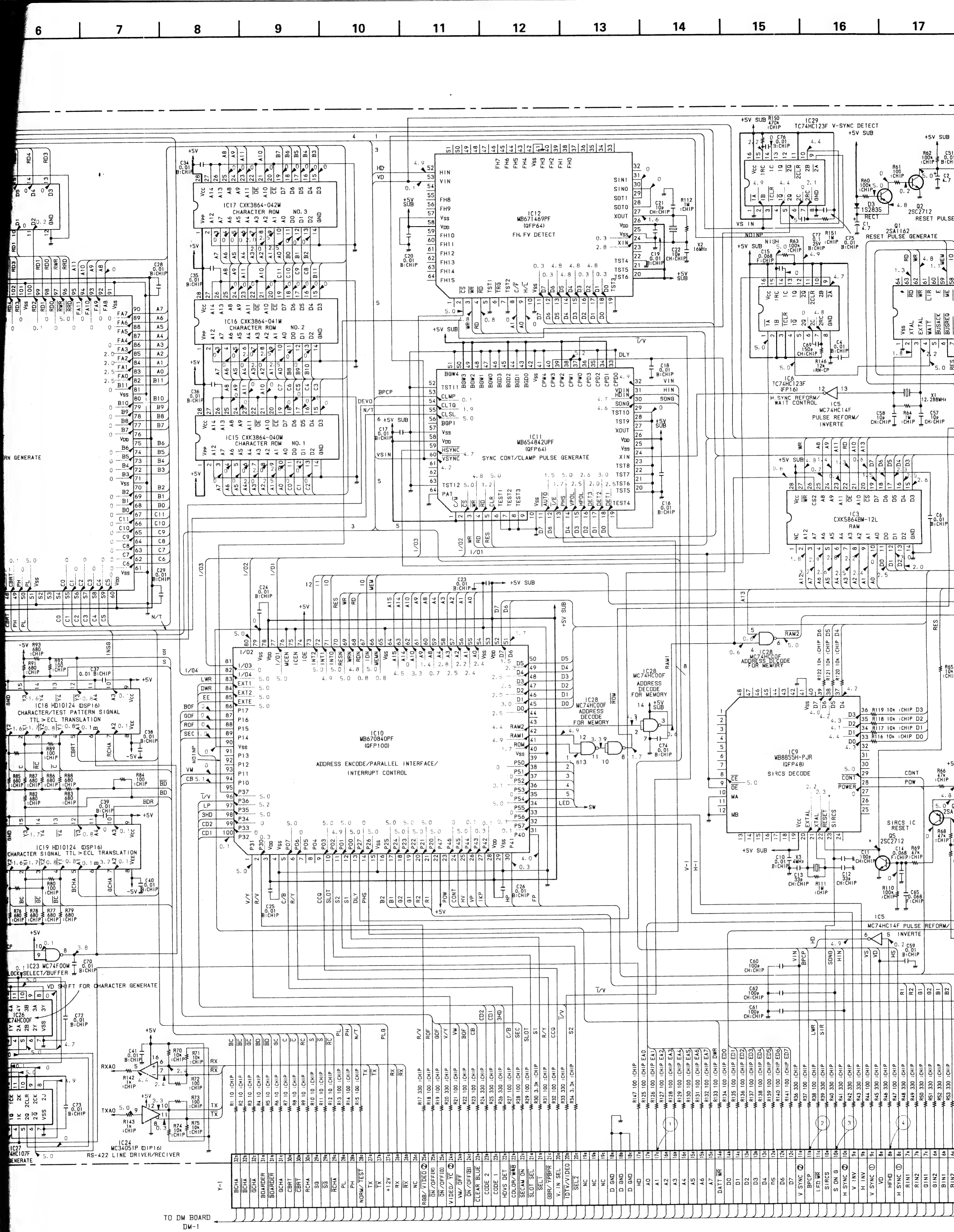
C1
C2
C3
C4
Q5
Q6
Q7

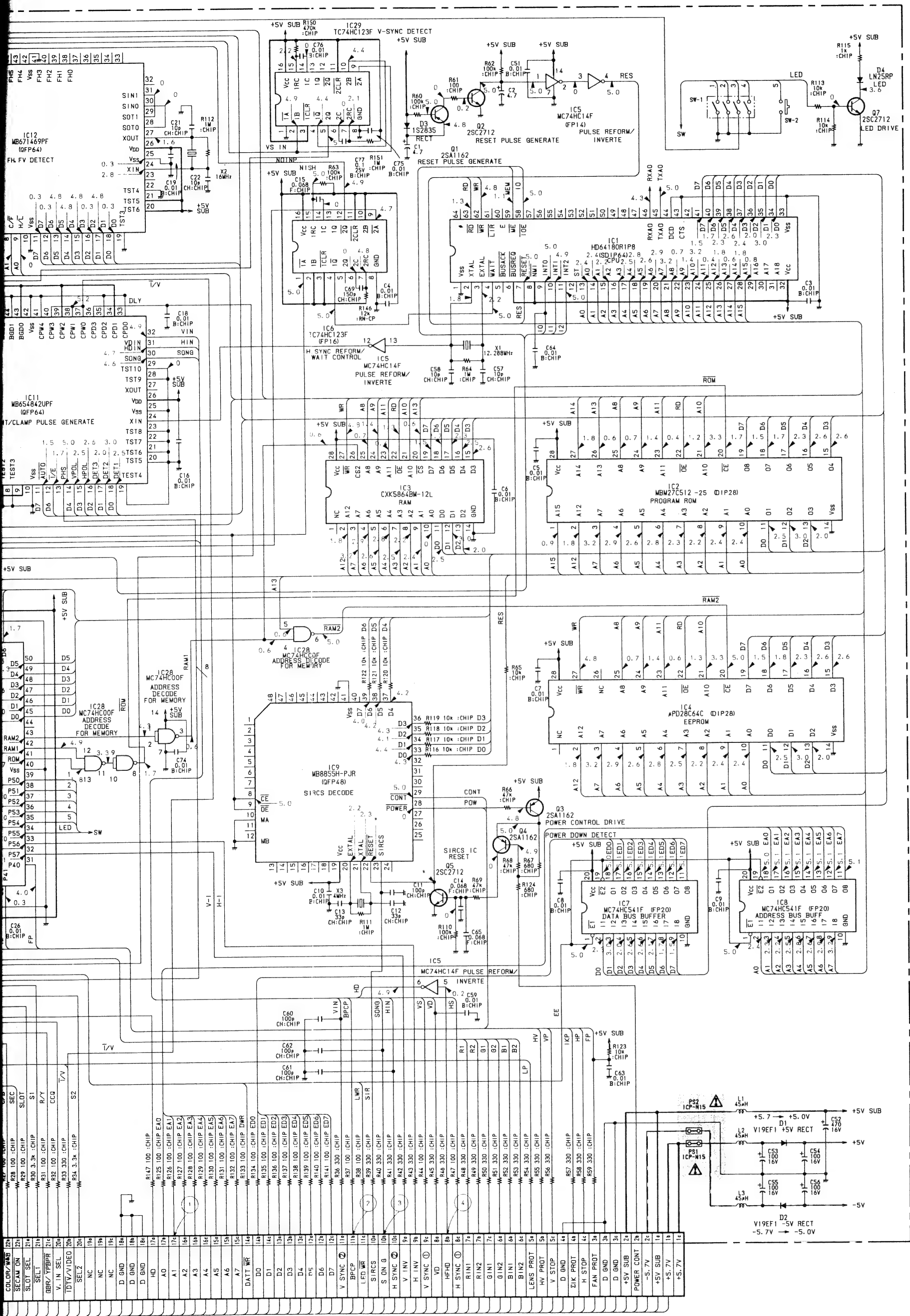
D1
D2
D3
D4

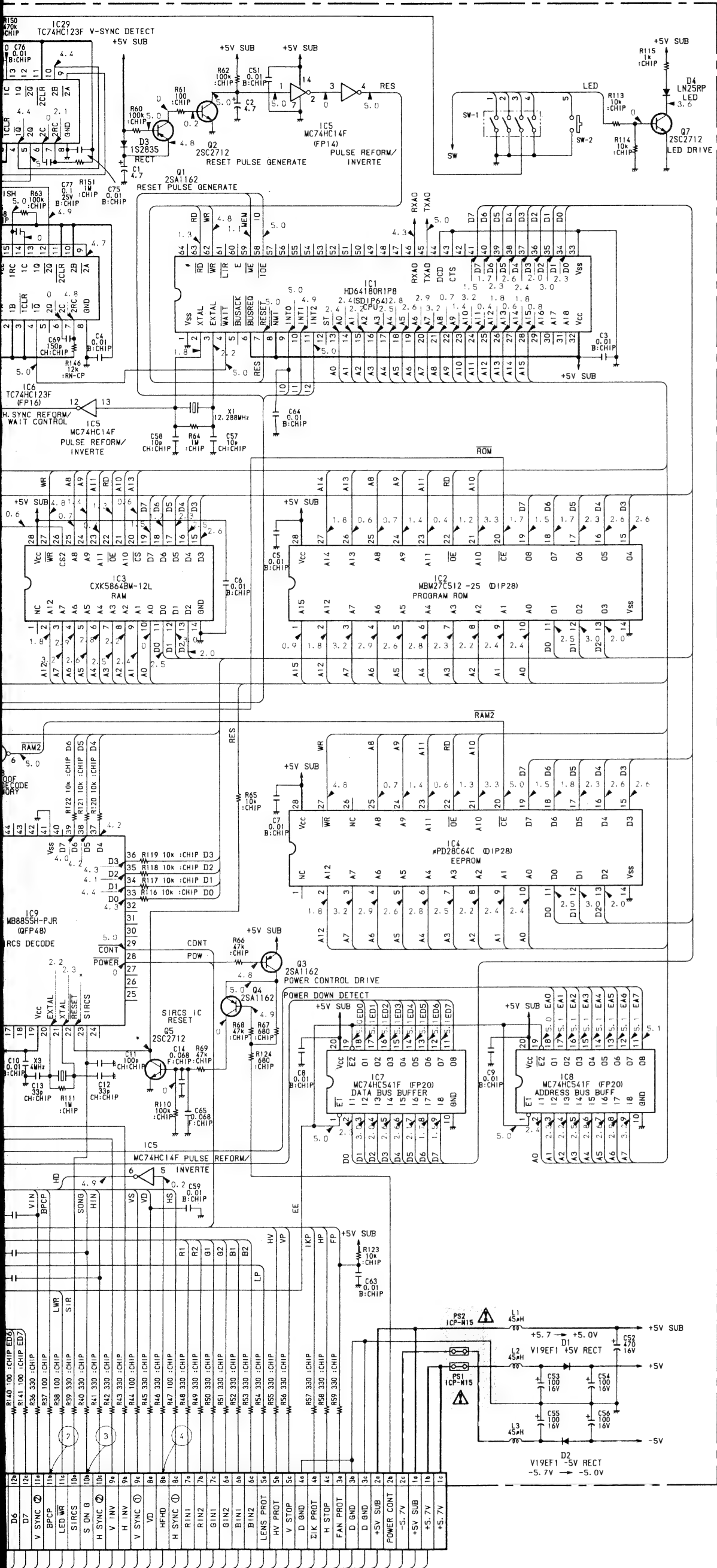
– Y Board – (Conductor Side)



D1	F - 9
D2	E - 9
D3	
D4	A - 5

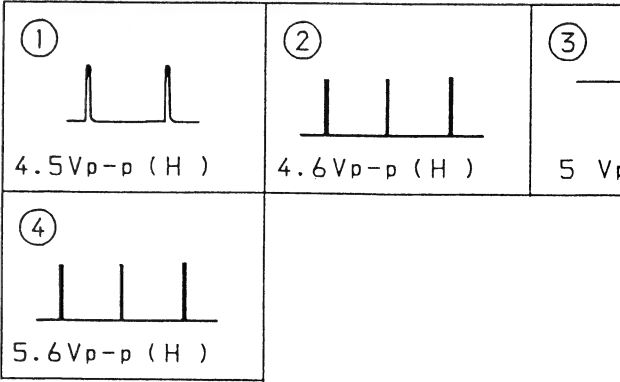


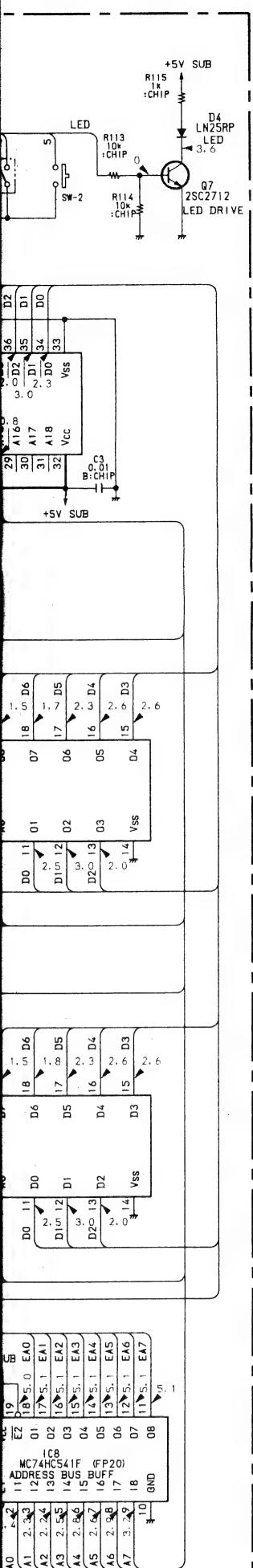




IC1	HD64180R1PB	CPU
2	MBM27C512-25	PROGRAM ROM
3	CXX5864BM-12L	RAM
4	μPD28C64C-20	EEPROM
5	MC74HC14F	PULSE REFORM/INVERTE
6	TC74HC123F	H-SYNC REFORM/WAIT CONTROL
7	MC74HC541F	DATA BUS BUFFER
8	MC74HC541F	ADDRESS BUS BUFFER
9	MB8855-PJR	SIRCS DECODE
10	MB670840PF	ADDRESS ENCODE/PARALLEL INTERFA
11	MB654842UPF	SYNC CONTROL/CLAMP PULSE
12	MB671469PF	fH, fV DETECT
13	MB605195PF	CHARACTER & TEST PATTERN GENERA
14	CXX5814P-45L	CHARACTER DISPLAY RAM
15	CXX3864-040M	CHARACTER FONT ROM No.1
16	CXX3864-041M	CHARACTER FONT ROM No.2
17	CXX3864-042M	CHARACTER FONT ROM No.3
18	HD10124	CHARACTER/TEST PATTERN SIGNAL T
19	HD10124	CHARACTER SIGNAL TTL > ECL
20	CX23065	DIGITAL PHASE COMPERATOR
21	SN74S124N	DUAL VOLTAGE-CONTROLLED OSCILATO
22	μPC393G2	WINDOW COMPERATOR
23	MC74F00M	CLOCK SELECT/BUFFER
24	MC34051P	RS-422 LINE DRIVER/RECIVER
25	μPC393G2	VOLTAGE COMPERATOR
26	MC74HC00F	VD SHIFT for CHARACTER GENERATE
27	SN74HC107NS	VD SHIFT for CHARACTER GENERATE
28	MC74HC00F	ADDRESS DECODE for MEMORY
29	TC74HC123F	V-SYNC DETECT
Q1	2SA1162-YG	RESET PULSE GENERATE
2	2SC2712-YG	RESET PULSE GENERATE
3	2SA1162-YG	POWER CONTROL DRIVE
4	2SA1162-YG	POWER DOWN DETECT
5	2SC2712-YG	SIRCS IC RESET
6	2SC2712-YG	CURRENT BUFFER
7	2SC2712-YG	LED DRIVE
D1	V19EF1	+5.7V --> +5.0V
2	V19EF1	-5.7V --> -5.0V
3	1S2835	RECTIFICATION
4	LN25PR	LED
5	1SS119	

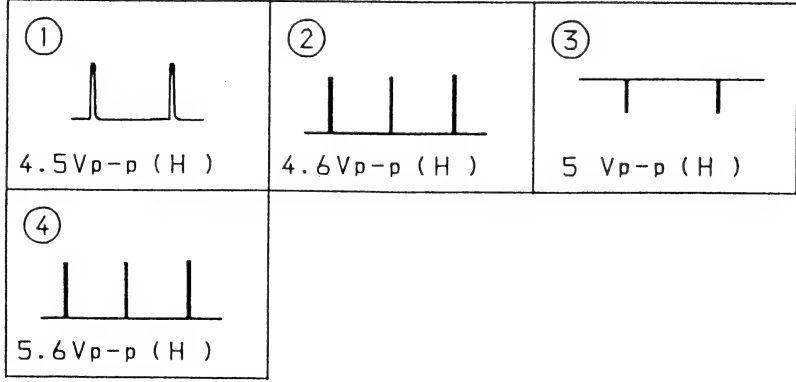
Y BOARD WAVEFORMS





IC1	HD64180R1P8	CPU
2	MBM27C512-25	PROGRAM ROM
3	CXK5864BM-12L	RAM
4	μ PD28C64C-20	EEPROM
5	MC74HC14F	PULSE REFORM/INVERTE
6	TC74HC123F	H-SYNC REFORM/WAIT CONTROL
7	MC74HC541F	DATA BUS BUFFER
8	MC74HC541F	ADDRESS BUS BUFFER
9	MB8855-PJR	SIRCS DECODE
10	MB670840PF	ADDRESS ENCODE/PARALLEL INTERFACE / INTERRUPT CONTROL
11	MB654842UPF	SYNC CONTROL/CLAMP PULSE GENERATE
12	MB671469PF	fH, fV DETECT
13	MB605195PF	CHARACTER & TEST PATTERN GENERATE
14	CXK5814P-45L	CHARACTER DISPLAY RAM
15	CXK3864-040M	CHARACTER FONT ROM No.1
16	CXK3864-041M	CHARACTER FONT ROM No.2
17	CXK3864-042M	CHARACTER FONT ROM No.3
18	HD10124	CHARACTER/TEST PATTERN SIGNAL TTL > ECL TRANSLATION
19	HD10124	CHARACTER SIGNAL TTL > ECL TRANSLATION
20	CX23085	DIGITAL PHASE COMPERATOR
21	SN74S124N	DUAL VOLTAGE-CONTROLLED OSCILATOR
22	μ PC393G2	WINDOW COMPERATOR
23	MC74F00M	CLOCK SELECT/BUFFER
24	MC34051P	RS-422 LINE DRIVER/RECIVER
25	μ PC393G2	VOLTAGE COMPERATOR
26	MC74HC00F	VD SHIFT for CHARACTER GENERATE
27	SN74HC107NS	VD SHIFT for CHARACTER GENERATE
28	MC74HC00F	ADDRESS DECODE for MEMORY
29	TC74HC123F	V-SYNC DETECT
Q1	2SA1162-YG	RESET PULSE GENERATE
2	2SC2712-YG	RESET PULSE GENERATE
3	2SA1162-YG	POWER CONTROL DRIVE
4	2SA1162-YG	POWER DOWN DETECT
5	2SC2712-YG	SIRCS IC RESET
6	2SC2712-YG	CURRENT BUFFER
7	2SC2712-YG	LED DRIVE
D1	V19EF1	+ 5.7V --> + 5.0V
2	V19EF1	- 5.7V --> - 5.0V
3	1S2835	RECTIFICATION
4	LN25PR	LED
5	1SS119	

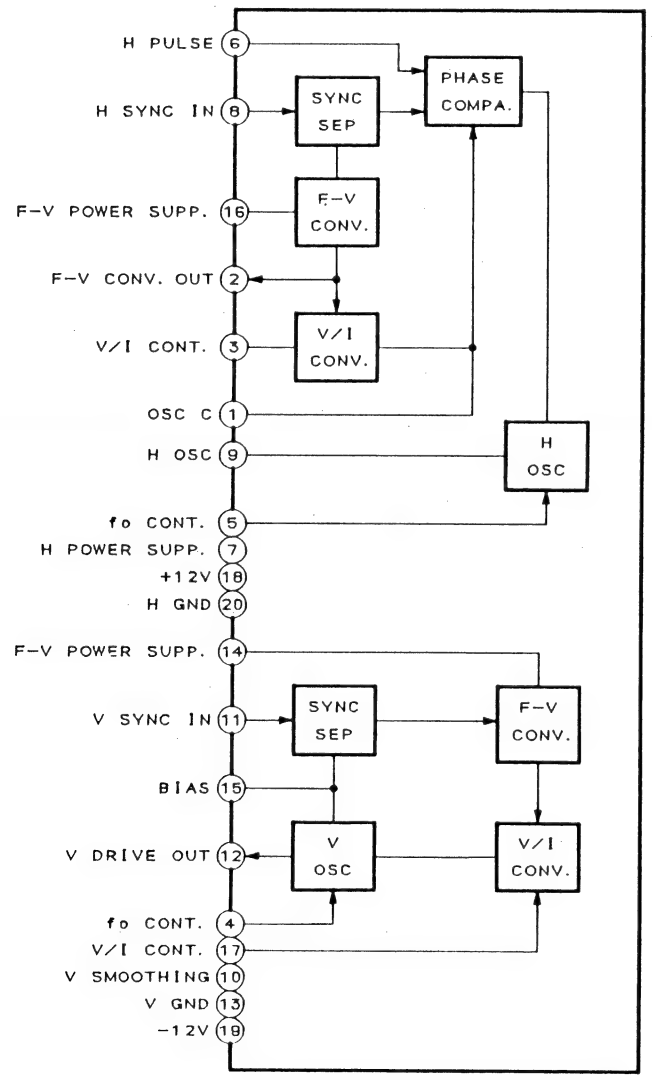
Y BOARD WAVEFORMS



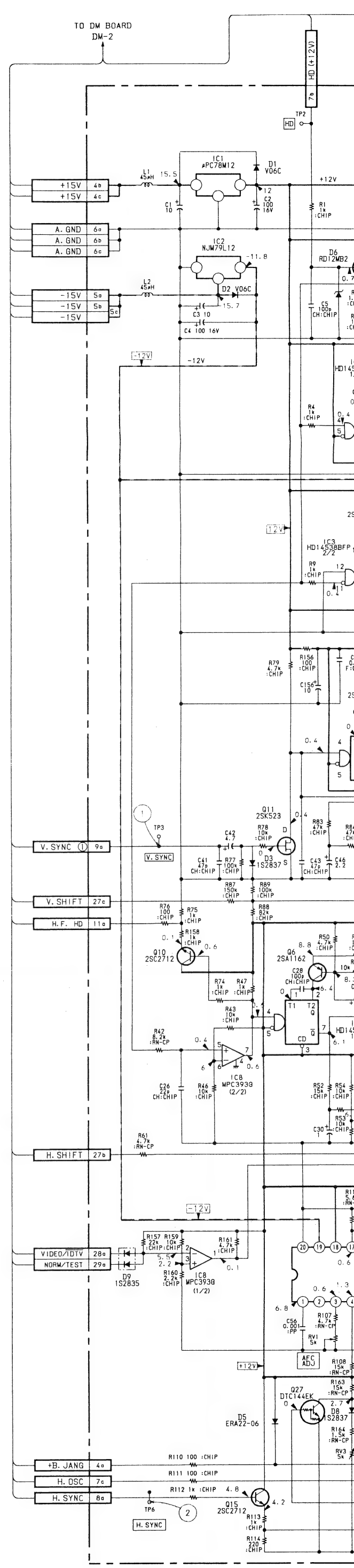
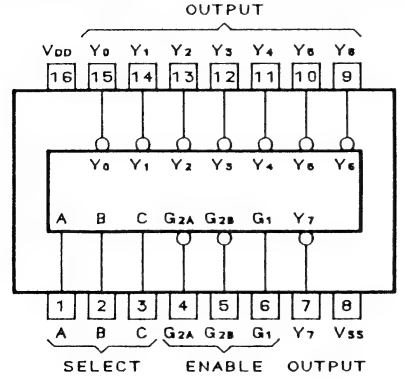
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P

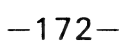
IC1	μ PC78M12	+12V REG	24	2SA1162	SIZE MULTIPLEX-8
2	μ PC79L12	-12V REG	25	DTC144EK	FAN PROT-1
3	HD14538BFP	AD HD GEN	26	DTC144EK	FAN PROT-2
4	μ PC4558G	AD HD LEVEL COMP	27	DTC144EK	VIDEO AFC SW-1
5	HD14538BFP	H.BLK GEN	28	2SC2712	VIDEO AFC BIAS
6	μ PC4558G	H.BLK LEVEL COMP	29	DTC144EK	VIDEO AFC SW-2
8	μ PC393G	SW	30	DTC144EK	VIDEO AFC SW-3
9	HD14538BFP	AFC HD GEN	31	FMW1	V.STOP PROT
10	μ PC814G	AFC HD LEVEL COMP-1	201	2SC2712	HD BUFF-2
11	HD14538BFP	V.SHIFT GEN	202	2SC2712	VD BUFF-2
12	μ PC814G	V.SHIFT LEVEL COMP	203	2SC2712	1/2H BUFF
13	HD14538BFP	PULSE GEN	204	2SC2712	1/2V BUFF
14	SBX4011-01	JUNGLE	205	FMW2	V.SIN MULTIPLEX-1
15	μ PC4558G	LEVEL SHIFT	206	IMX2	V.SIN MULTIPLEX-2
16	μ PC814G	AFC HD LEVEL COMP-2	207	FMS2	V.SIN MULTIPLEX-3
17	HD14053BFP	V.SYNC SW	208	FMW1	V.SIN MULTIPLEX-4
201	CXA1158P	REG1 WAVE GEN	209	FMW1	V.SIN MULTIPLEX-5
202	HD74HC04BFP	PULSE INV.	210	IMX2	V.SIN MULTIPLEX-6
203	μ PC814G	REG1 WAVE BUFF-1	211	2SC2712	V.SIN MULTIPLEX-7
204	μ PC814G	REG1 WAVE BUFF-2	212	2SA1162	V.SIN MULTIPLEX-8
205	μ PC814G	REG1 WAVE BUFF-3	213	FMW2	H.SIN MULTIPLEX-1
206	μ PC814G	REG1 WAVE BUFF-4	214	IMX2	H.SIN MULTIPLEX-2
207	μ PC814G	REG1 WAVE BUFF-5	215	FMS2	H.SIN MULTIPLEX-3
208	μ PC4558G	V.SAW RECT	216	FMW1	H.SIN MULTIPLEX-4
209	μ PC4558G	V.PARA BIAS	217	FMW1	H.SIN MULTIPLEX-5
210	HD14053BFP	WAVE DEVIDER	218	IMX2	H.SIN MULTIPLEX-6
211	μ PC4558G	V.SIN BUFF	219	2SC2712	H.SIN MULTIPLEX-7
213	μ PC814G	TILT BUFF-1	220	2SA1162	H.SIN MULTIPLEX-8
214	μ PC814G	TILT BUFF-2	221	2SC2712	BLK BUFF-1
215	μ PC814G	H.PARA BIAS	222	FMS1	TILT SW-1
217	μ PC814G	H.SAW RECT	223	2SC2712	TILT SW-2
218	HD14053BFP	H.SIN DEVIDER	224	FMS1	TILT SW-3
219	μ PC814G	H.SIN BUFF	225	2SC2712	TILT SW-4
220	μ PC814G	V.BLK SW	226	FMW1	TILT SW-5
221	HD74HC138BFP	BLK MIX	227	2SA1162	TILT SW-6
401	μ PC393G	H.BLK LEVEL DET	228	FMW1	TILT SW-7
			229	2SA1162	TILT SW-8
			230	2SA1162	HD BUFF-3
			231	2SA1162	BLK BUFF-2
Q1	2SC2712	HD BUFF-1			
2	2SA1162	AD-HD BIAS			
3	2SC2712	AD-HD BUFF	401	2SC3668	+5.7V RIPPLE FILTER
4	2SA1162	H.BLK BIAS-1	402	2SA1428	-5.7V RIPPLE FILTER
5	2SA1162	H.BLK BIAS-2			
6	2SA1162	H.SHIFT BIAS-1	D1	V06C	+12V REG PROT
7	2SA1162	H.SHIFT BIAS-2	2	V06C	-12V REG PROT
8	2SA1162	H.SHIFT BIAS-3	3	1S2837	V.SYNC CLAMP
9	2SC2712	AFC HD BUFF	4	1S2837	BIAS-1
10	2SC2712	H.F. HD BUFF	5	ERA22-06	AFC PROT
11	2SK523	V.SYNC SW	6	RD12MB2	H.PULSE CLAMP
12	2SA1162	V.SHIFT BIAS-1	7	RD10MB2	LIMIT
13	2SA1162	V.SHIFT BIAS-2	8	1S2837	THERM CANCEL
14	2SC2712	V.SYNC BUFF	9	1S2835	GATE
15	2SC2712	H.SYNC BUFF	201	1S5123	V.SAW CLIP
16	2SC2712	VD BUFF-1	202	1S2837	V.PARA RECT
17	FMW2	SIZE MULTIPLEX-1	203	1S2837	BIAS-2
18	IMX2	SIZE MULTIPLEX-2	204	1S2837	H.PARA RECT
19	FMS2	SIZE MULTIPLEX-3	205	1S5123	H.SAW CLIP
20	FMW1	SIZE MULTIPLEX-4	206	1S2837	BIAS-2
21	FMW1	SIZE MULTIPLEX-5	207	1S2837	
22	IMX2	SIZE MULTIPLEX-6	208	1S2837	
23	2SC2712	SIZE MULTIPLEX-7			

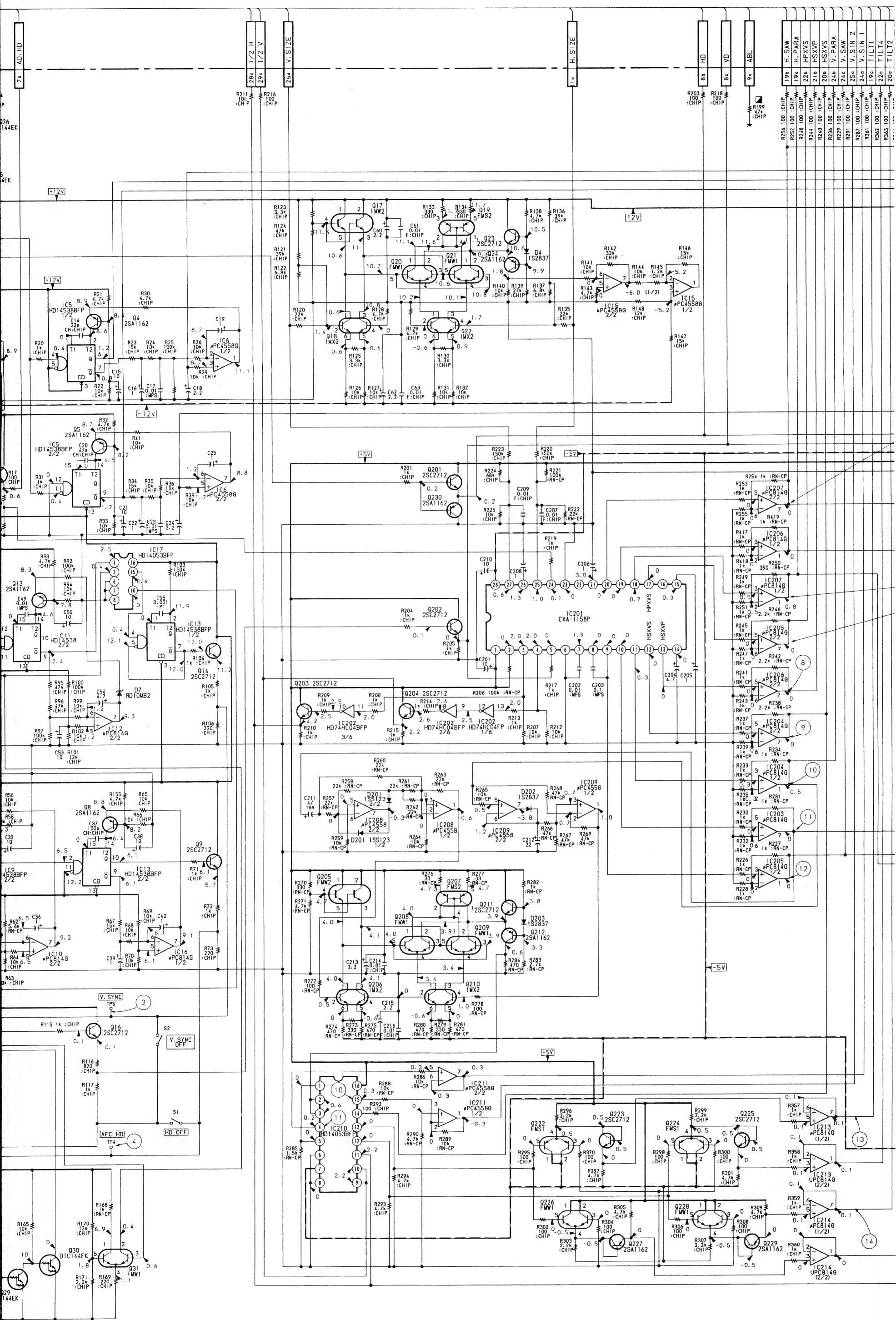
DA BOARD IC14 SBX-4011-01

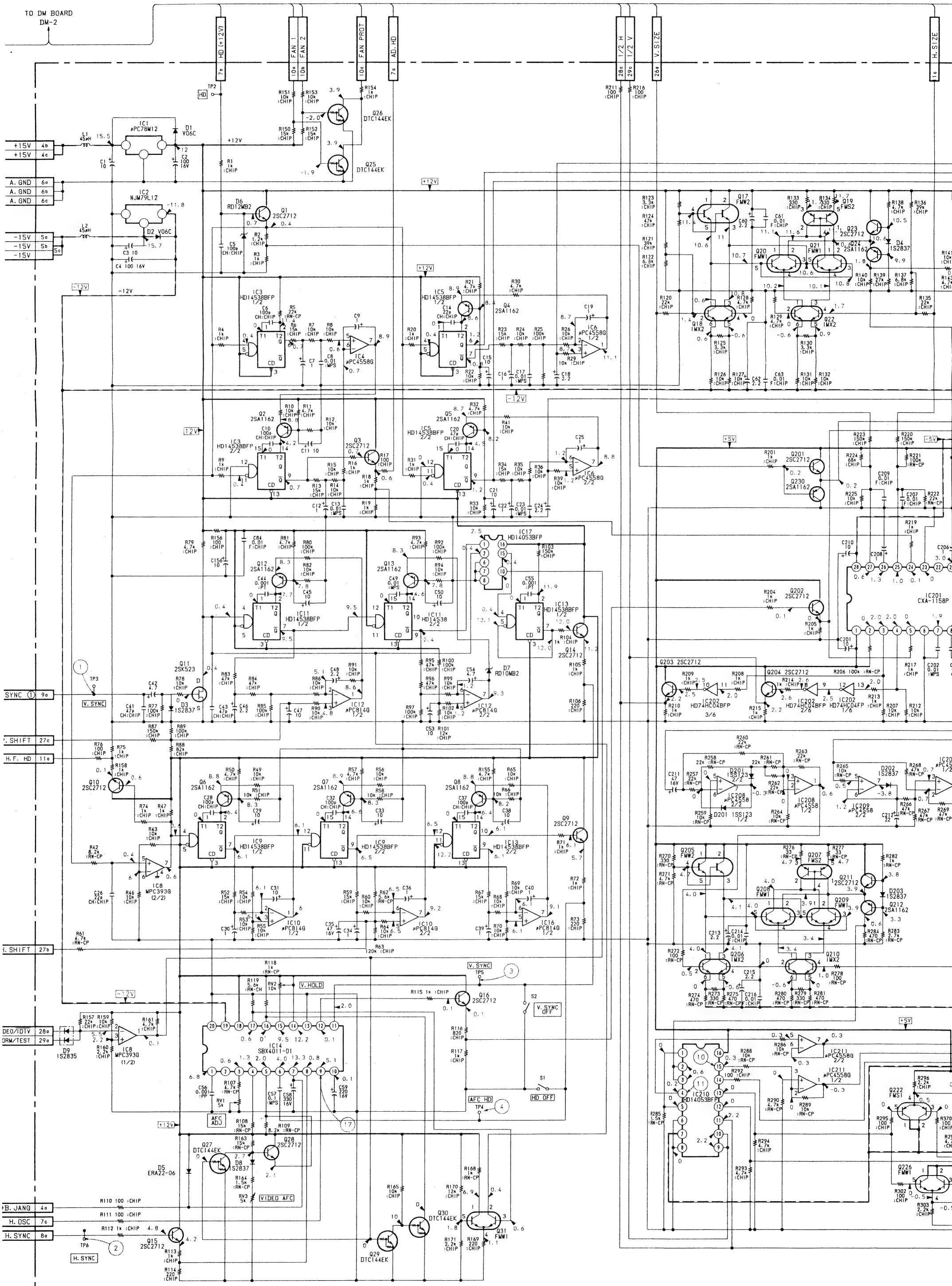


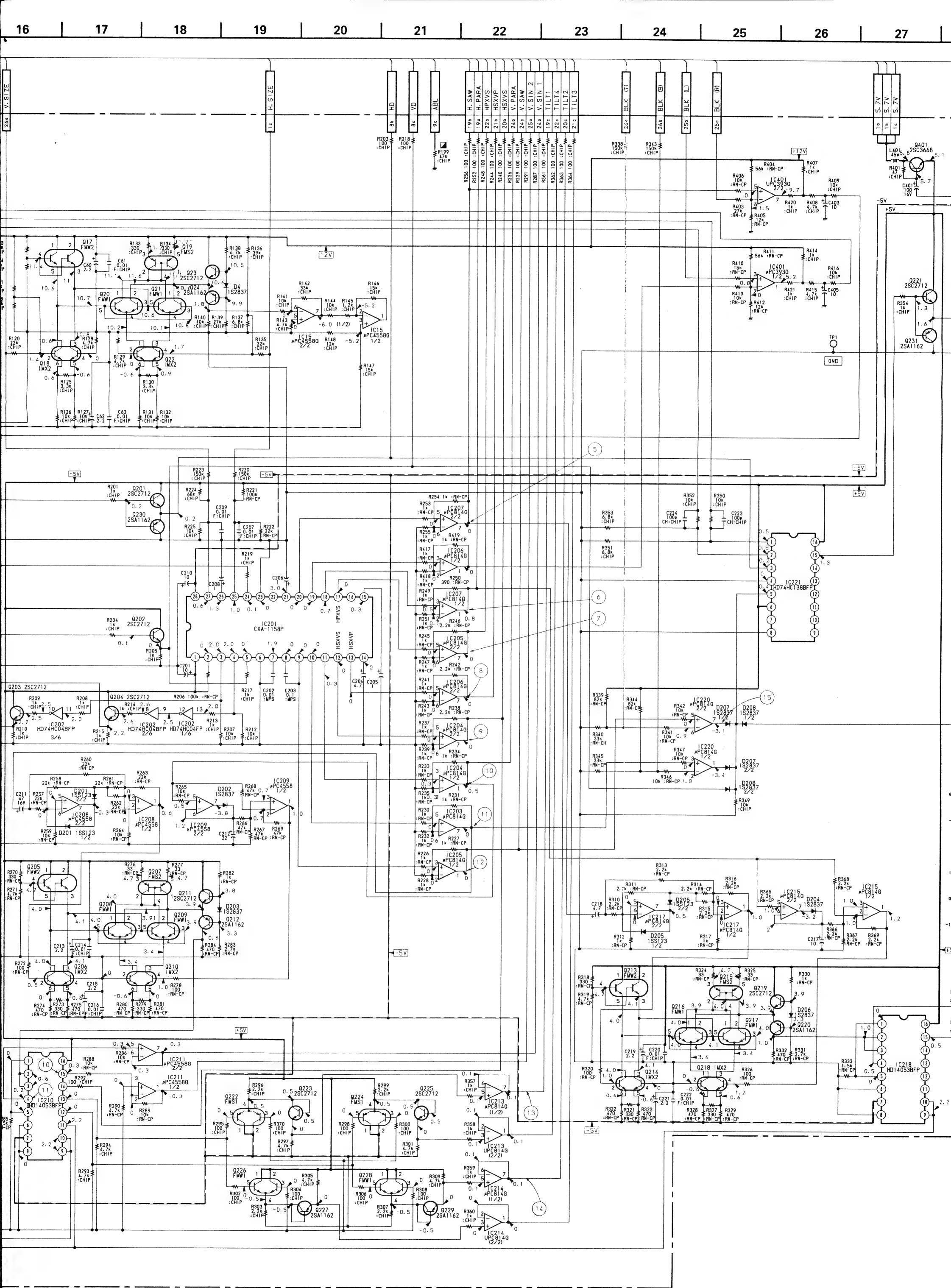
DA BOARD IC221 HD74HC138BFP











DB

[ELECTRONIC VR]

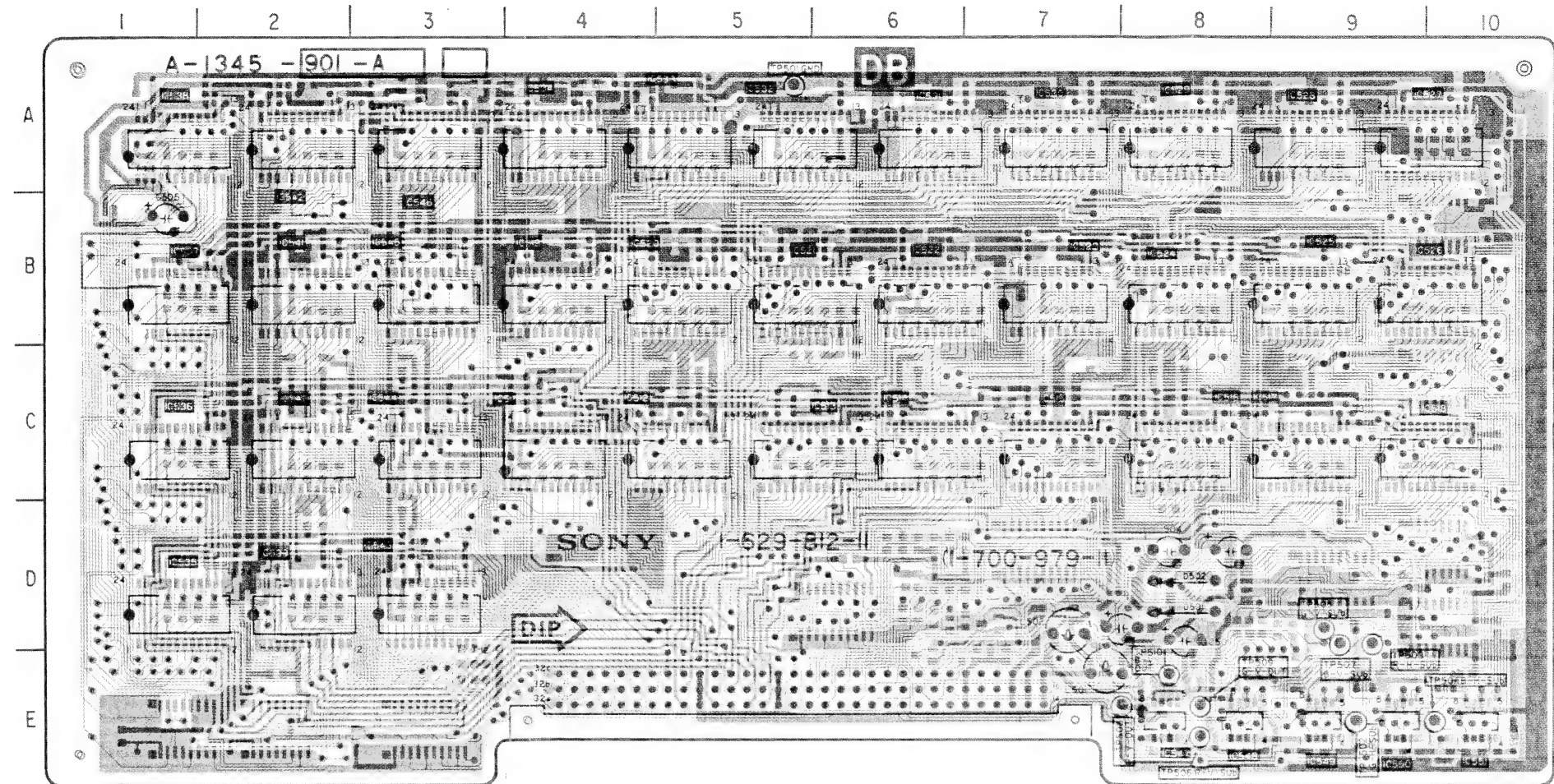
DB BOARD
IC

	CONDUCTOR SIDE	COMPONENT SIDE
IC501	D-5	
IC502	D-4	
IC503	E-8	
IC504	D-2	
IC505	D-1	
IC506	D-1	
IC507	C-1	
IC508	B-1	
IC509	E-9	
IC510	E-9	
IC511		C-4
IC512		C-5
IC513		C-5
IC514		C-6
IC515		C-7
IC516		C-8
IC517		C-9
IC518		C-10
IC519		B-4
IC520		B-5
IC521		B-5
IC522		B-6
IC523		B-7
IC524		B-8
IC525		B-9
IC526		B-10
IC527		A-10
IC528		A-9
IC529		A-8
IC530		A-7
IC531		A-6
IC532		A-5
IC533		A-5
IC534		A-4
IC535		D-1
IC536		C-1
IC537		B-1
IC538		A-1
IC539		D-2
IC540		C-2
IC541		B-2
IC542		A-2
IC543		D-3
IC544		C-3
IC545		B-3
IC546		A-3
IC547		E-8
IC548		E-8
IC549		E-9
IC550		E-9
IC551		E-10
IC552	B-10	

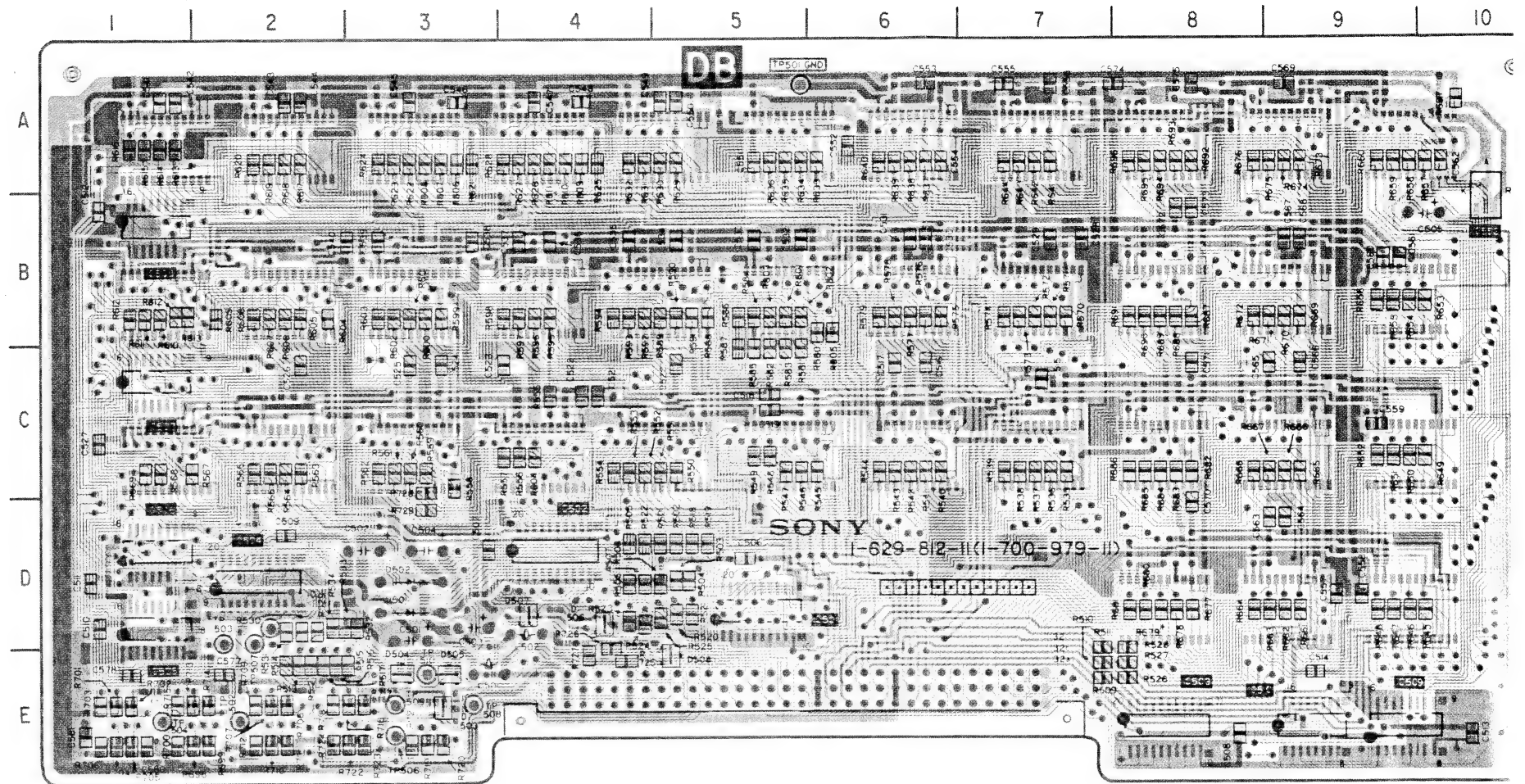
DIODE

	CONDUCTOR SIDE	COMPONENT SIDE
D501	D-3	D-8
D502	D-3	D-8
D503	E-3	
D504	E-3	
D505	E-3	
D506	D-4	
D507	D-4	
D508	E-5	

- DB Board -



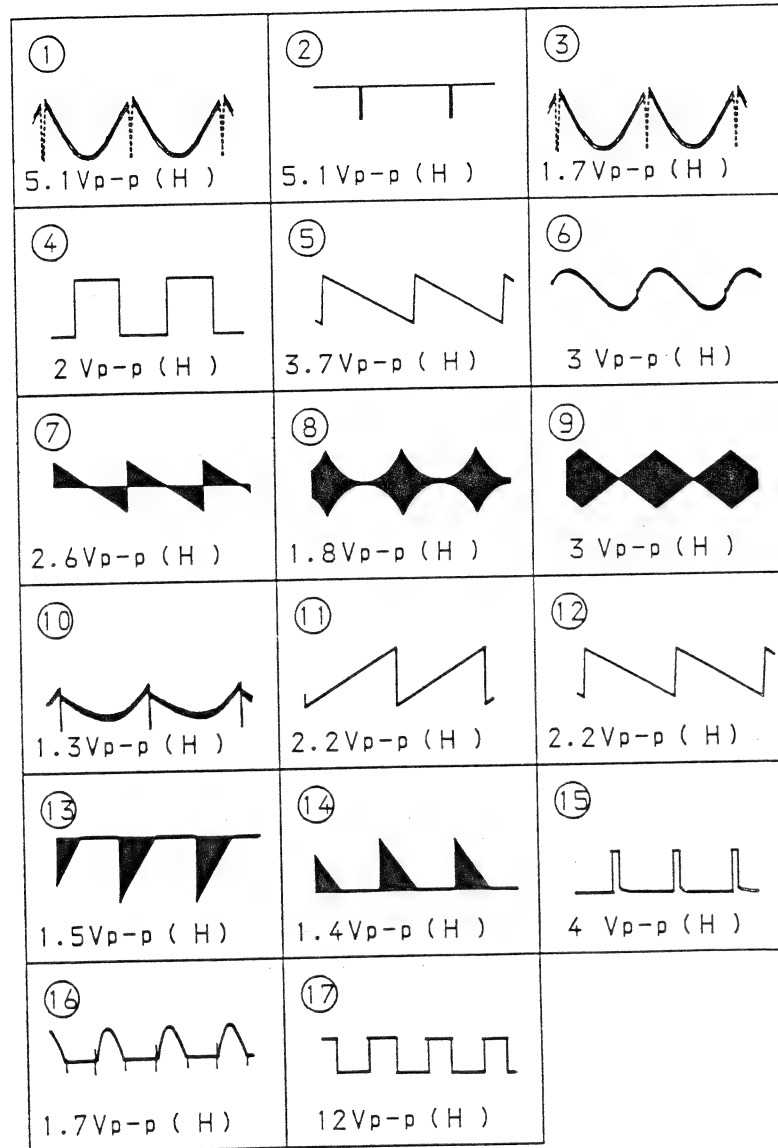
— DB Board —



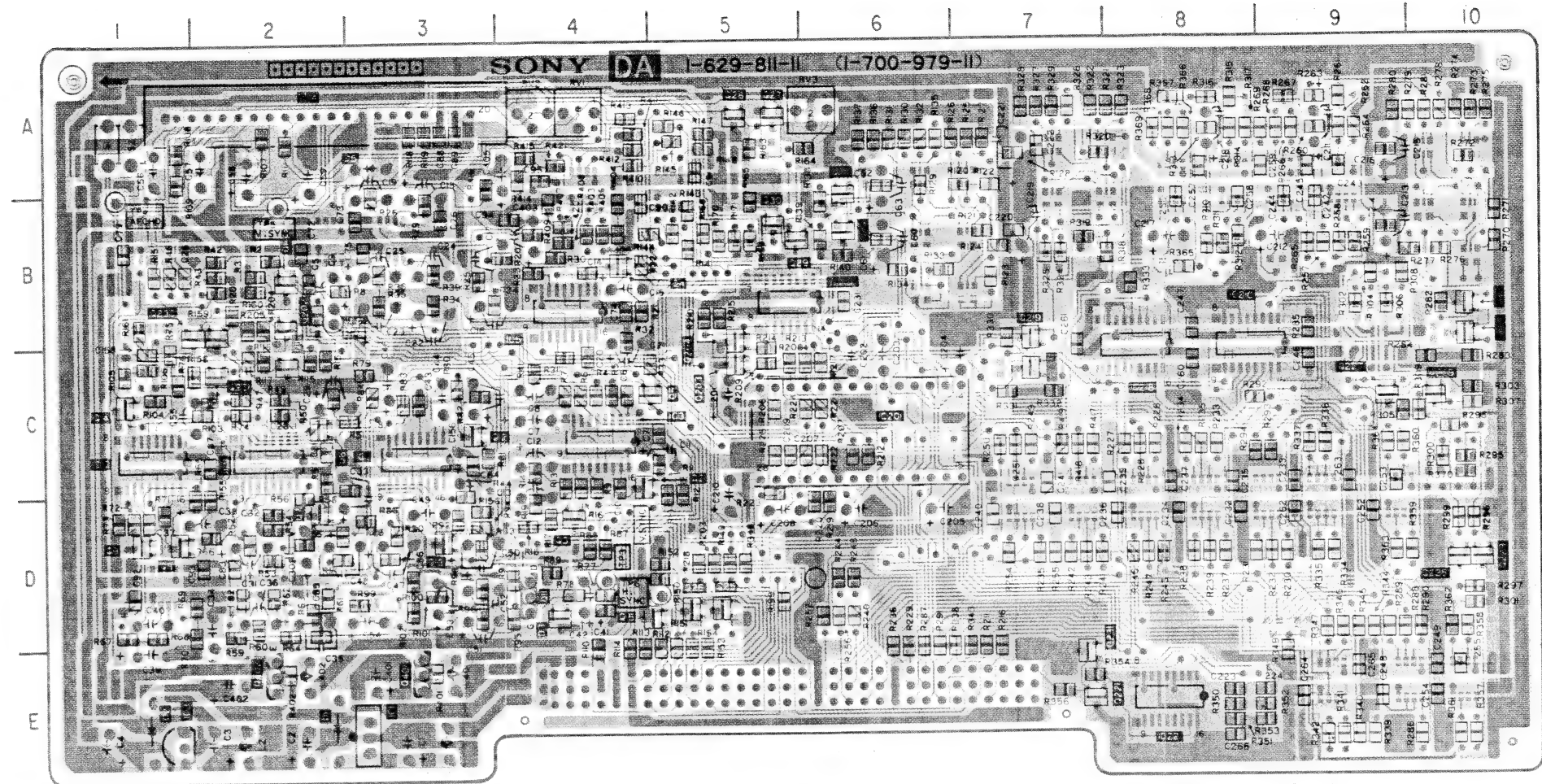
DA

[LARGE WAVEFORM GENERATOR]

DA BOARD WAVEFORM



— DA Board — (Conductor Side)



IC1	C
IC2	S
IC3	E
IC4	C
IC5	B
IC6	
IC8	
IC9	C
IC10	
IC11	C
IC12	
IC13	C
IC14	A
IC15	
IC16	
IC17	
IC201	C
IC202	E
IC203	
IC204	
IC205	
IC206	
IC207	
IC208	
IC209	
IC210	C
IC211	
IC213	
IC214	
IC215	
IC217	
IC218	
IC219	
IC220	
IC221	
IC401	

Q1	
Q2	
Q3	
Q4	
Q5	
Q6	
Q7	
Q8	
Q9	
Q10	
Q11	
Q12	
Q13	
Q14	
Q15	
Q16	
Q17	
Q18	
Q19	
Q20	
Q21	
Q22	
Q23	
Q24	
Q25	
Q26	

DA

[LARGE WAVEFORM GENERATOR]

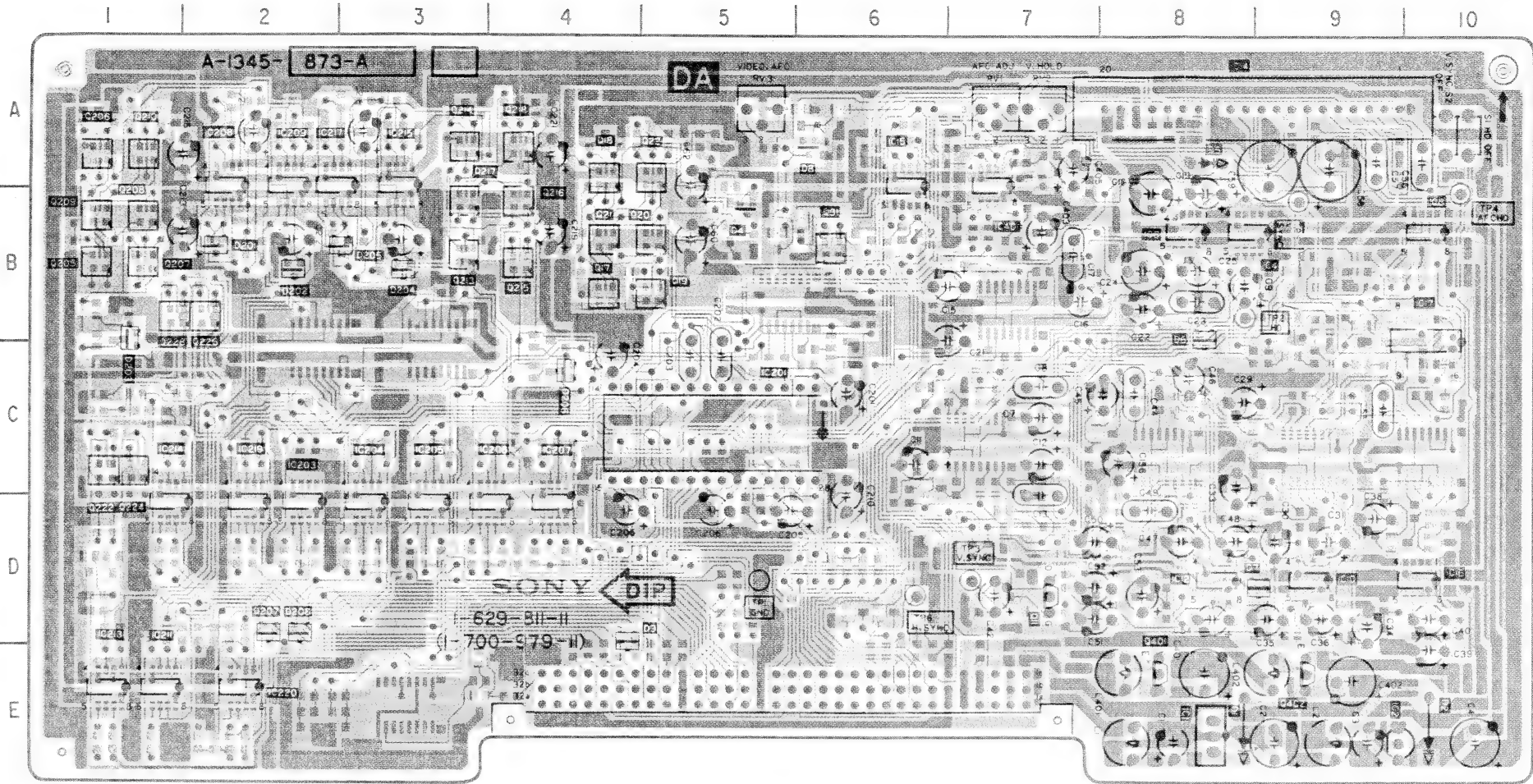
DA BOARD

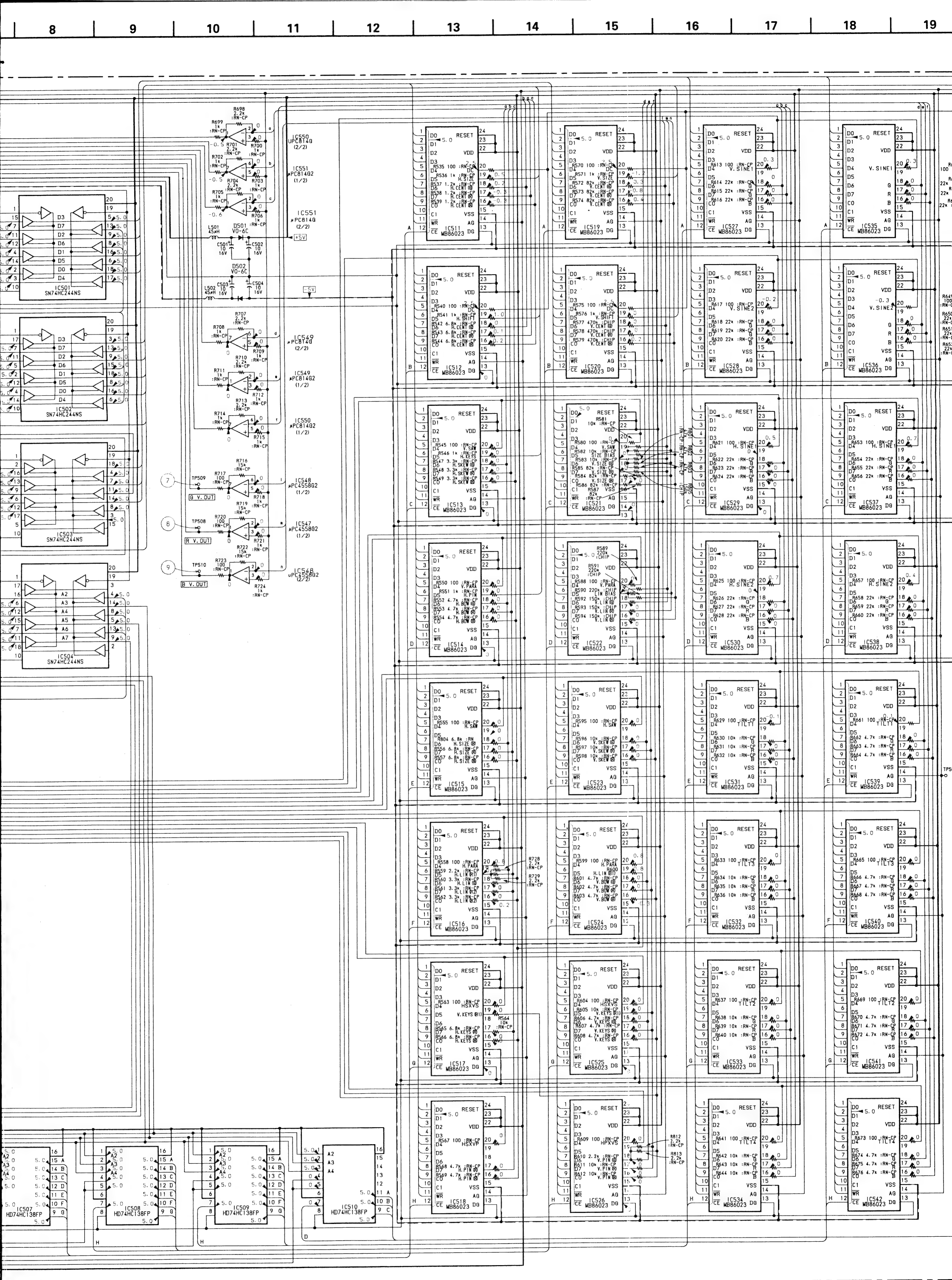
IC			CONDUCTOR SIDE		COMPONENT SIDE	
	CONDUCTOR SIDE	COMPONENT SIDE				
IC1	E-3	E-8	Q27	A-5		
IC2	E-1	E-9	Q28	A-5		
IC3	C-4		Q29	B-5		
IC4		B-9	Q30	B-5		
IC5	B-4		Q31		B-6	
IC6		B-8	Q201	B-2		
IC8		B-10	Q202	B-2		
IC9	C-2		Q203	C-5		
IC10		D-9	Q204	B-5		
IC11	C-3		Q205		B-1	
IC12		D-8	Q206		A-1	
IC13	C-1		Q207		B-1	
IC14	A-2	A-8	Q208		B-1	
IC15		A-6	Q209		B-1	
IC16		D-10	Q210		A-1	
IC17		B-10	Q211	B-10		
IC201	C-6	C-5	Q212	B-10		
IC202	B-5		Q213		B-3	
IC203		D-2	Q214		A-3	
IC204		D-3	Q215		B-4	
IC205		D-3	Q216		B-4	
IC206		D-4	Q217		B-3	
IC207		D-4	Q218		A-3	
IC208		A-2	Q219	B-7		
IC209		A-2	Q220	C-7		
IC210	C-8		Q221	E-7		
IC211		E-1	Q222		C-1	
IC213		E-1	Q223	D-10	C-1	
IC214		D-1	Q224			
IC215		A-3	Q225	D-10	B-2	
IC217		A-2	Q226			
IC218	C-8		Q227	C-9	B-1	
IC219		D-2	Q228			
IC220		E-2	Q229	C-10		
IC221	E-8		Q230	B-2		
IC401		A-7	Q231	E-7		
			Q401	E-3	E-8	
			Q402	E-2	E-9	

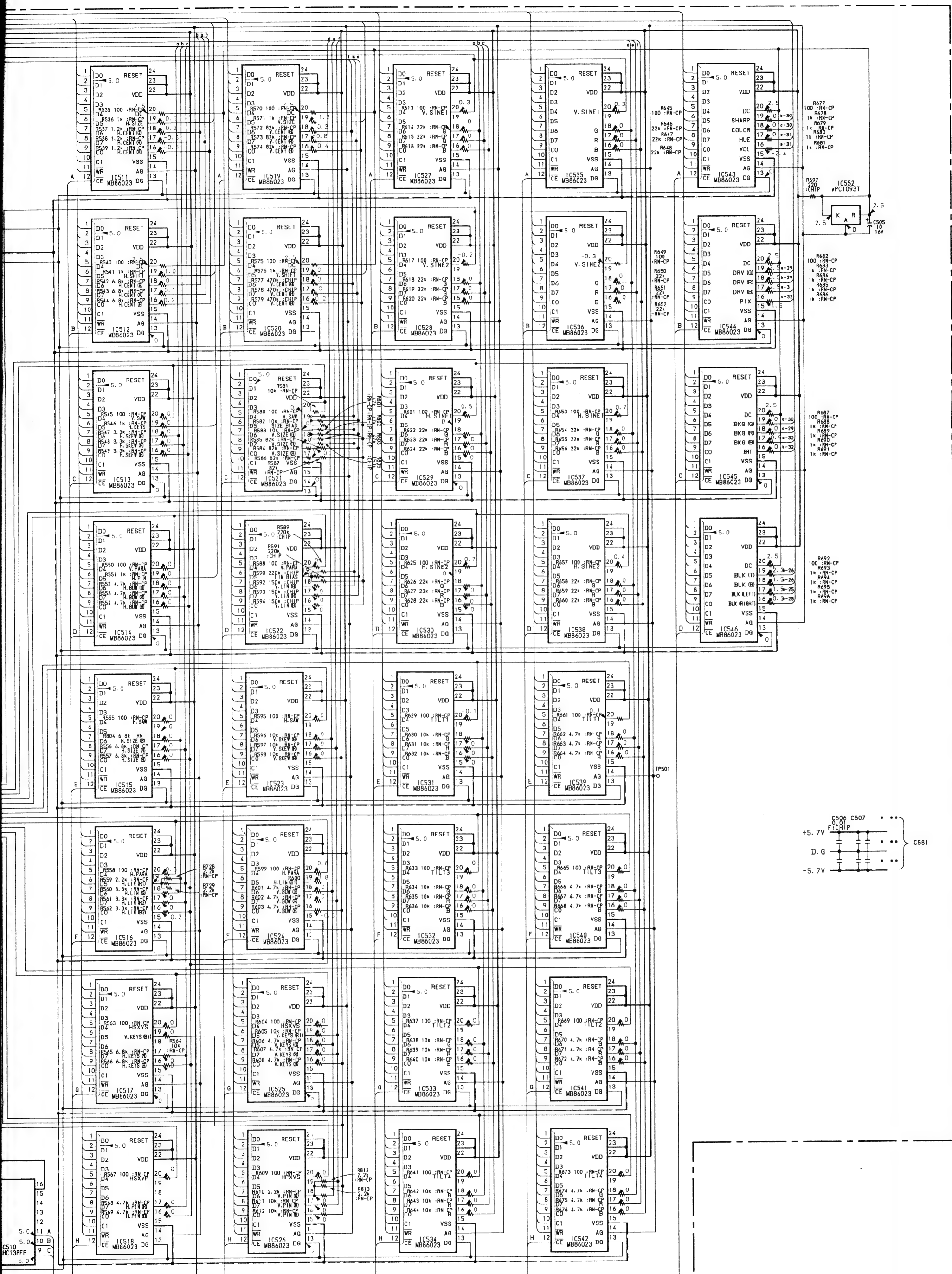
TRANSISTOR			DIODE		
	CONDUCTOR SIDE	COMPONENT SIDE		CONDUCTOR SIDE	COMPONENT SIDE
Q1	B-2		D1	E-2	E-8
Q2	C-4		D2	E-1	E-10
Q3	D-4		D3	D-4	
Q4	B-4		D4		B-5
Q5	C-5		D5	A-3	A-8
Q6	C-2		D6		B-8
Q7	D-2		D7		D-9
Q8	D-1		D8		A-6
Q9	D-1		D9		D-4
Q10	C-2		D201		B-2
Q11	D-4	D-7	D202		B-2
Q12	C-3		D203		C-1
Q13	D-3		D204		B-3
Q14	C-1		D205		B-3
Q15	D-5		D206		C-4
Q16	B-2		D207		D-2
Q17		B-4	D208		D-2
Q18		A-4			
Q19		B-5			
Q20		B-5			
Q21		B-4			
Q22		A-5			
Q23	B-6				
Q24	B-6				
Q25	D-5				
Q26	D-5				

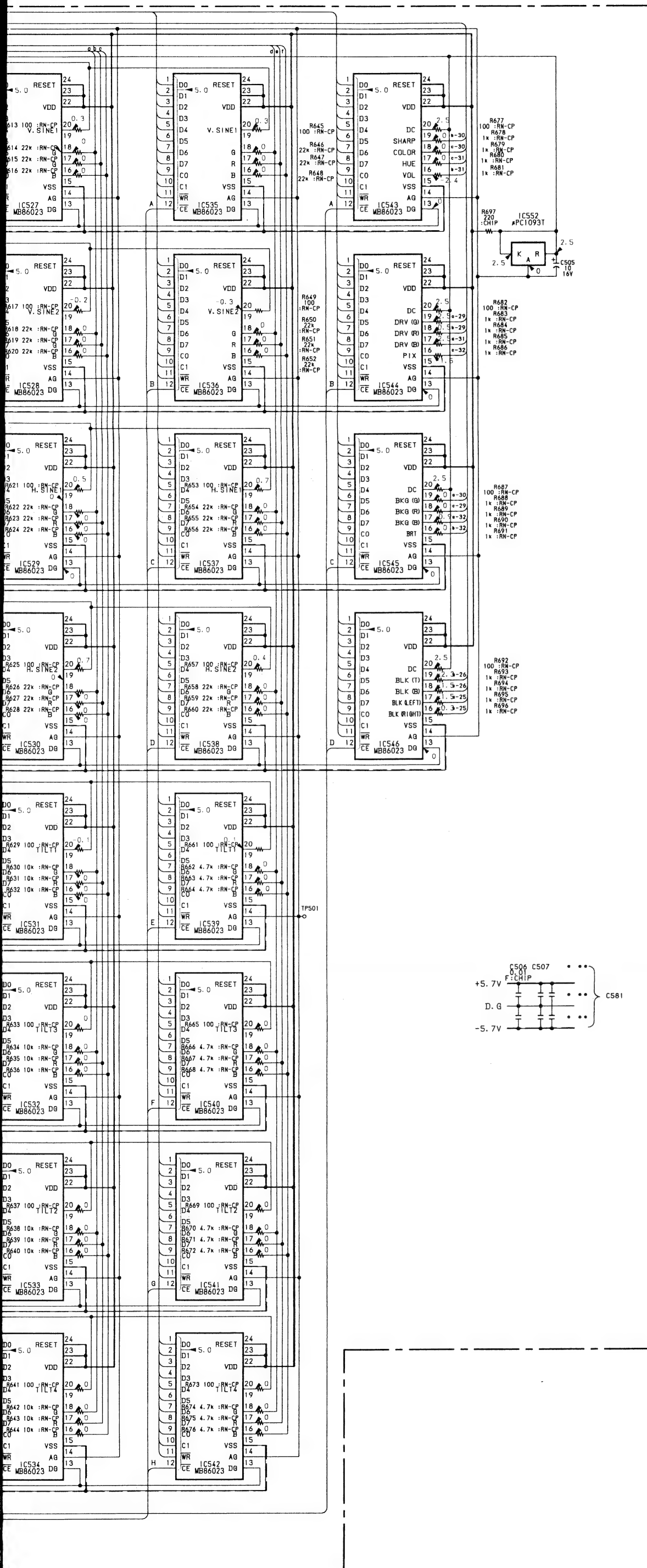
VARIABLE RESISTOR		
	CONDUCTOR SIDE	COMPONENT SIDE
RV1	A-4	A-7
RV2	A-4	A-7
RV3	A-6	A-5

— DA Board — (Component Side)









	IC501	HD74HC244FP	DATA BAS BUFF-1
	502	HD74HC244FP	DATA BAS BUFF-2
	503	HD74HC244FP	ADD BAS BUFF-1
	504	HD74HC244FP	ADD BAS BUFF-2
	505	HD74HC138FP	ADD DECODE-1
	506	HD74HC138FP	ADD DECODE-2
	507	HD74HC138FP	ADD DECODE-3
	508	HD74HC138FP	ADD DECODE-4
	509	HD74HC138FP	ADD DECODE-5
	510	HD74HC138FP	ADD DECODE-6
	511	MB86023	H.CENT CONT-1
	512	MB86023	H.CENT CONT-2
	513	MB86023	H.SKEW CONT
	514	MB86023	H.BOW CONT
	515	MB86023	H.SIZE CONT
	516	MB86023	H.LIN CONT
	517	MB86023	H.KEYS CONT
	518	MB86023	H.PIN CONT
	519	MB86023	V.CENT CONT-1
	520	MB86023	V.CENT CONT-2
	521	MB86023	V.SIZE CONT
	522	MB86023	V.LIN CONT
	523	MB86023	V.SKEW CONT
	524	MB86023	V.BOW CONT
	525	MB86023	V.KEYS CONT
	526	MB86023	V.PIN CONT
	527	MB86023	H.ZONE-2 CONT
	528	MB86023	H.ZONE-3 CONT
	529	MB86023	H.ZONE-4 CONT
	530	MB86023	H.ZONE-5 CONT
DB	531	MB86023	H.ZONE-6 CONT
	532	MB86023	H.ZONE-7 CONT
	533	MB86023	H.ZONE-8 CONT
	534	MB86023	H.ZONE-9 CONT
	535	MB86023	V.ZONE-2 CONT
	536	MB86023	V.ZONE-3 CONT
	537	MB86023	V.ZONE-4 CONT
	538	MB86023	V.ZONE-5 CONT
	539	MB86023	V.ZONE-6 CONT
	540	MB86023	V.ZONE-7 CONT
	541	MB86023	V.ZONE-8 CONT
	542	MB86023	V.ZONE-9 CONT
	543	MB86023	USER CONT
	544	MB86023	DRV CONT
	545	MB86023	BKG CONT
	546	MB86023	BLK CONT
	547	μ PC4558G	V.OUT BUFF-1
	548	μ PC4558G	V.OUT BUFF-2
	549	μ PC814G	SUB OUT BUFF-1
	550	μ PC814G	SUB OUT BUFF-2
	551	μ PC814G	SUB OUT BUFF-3
	552	μ PC1093T	STAND VOLT REG
	D501	V06C	LEVEL SHIFT-1
	502	V06C	LEVEL SHIFT-2
	503	1SS123	PROT-1
	504	1SS123	PROT-2
	505	1SS123	PROT-3
	506	1SS123	PROT-4
	507	1SS123	PROT-5
	508	1SS123	PROT-6

DB BOARD WAVE

①



PAL	0.6Vp
SECAM	0.6Vp
NTSC3.58	0.6Vp
NTSC4.43	0.6Vp
S-VIDEO	0.6Vp

②



PAL	0.42Vp
SECAM	0.42Vp
NTSC3.58	0.42Vp
NTSC4.43	0.42Vp
S-VIDEO	0.42Vp

③



PAL	0.7 Vp-p
SECAM	0.7 Vp-p
NTSC3.58	0.7 Vp-p
NTSC4.43	0.7 Vp-p
S-VIDEO	0.7 Vp-p
HDTV	0.45 Vp-p

⑤



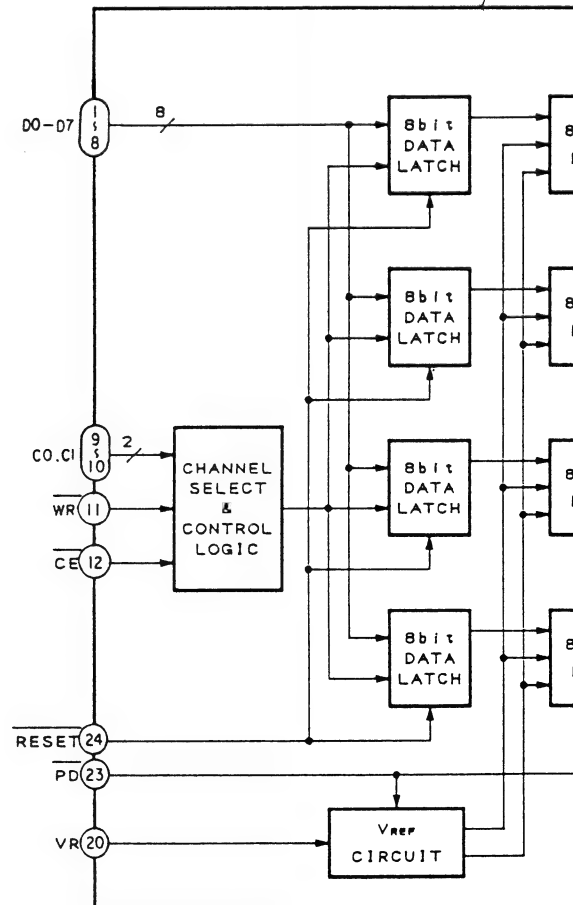
PAL	0.7Vp-p
SECAM	0.7Vp-p
NTSC3.58	0.7Vp-p
NTSC4.43	0.7Vp-p
S-ViDEO	0.7Vp-p
HDTV	0.7Vp-p

⑦



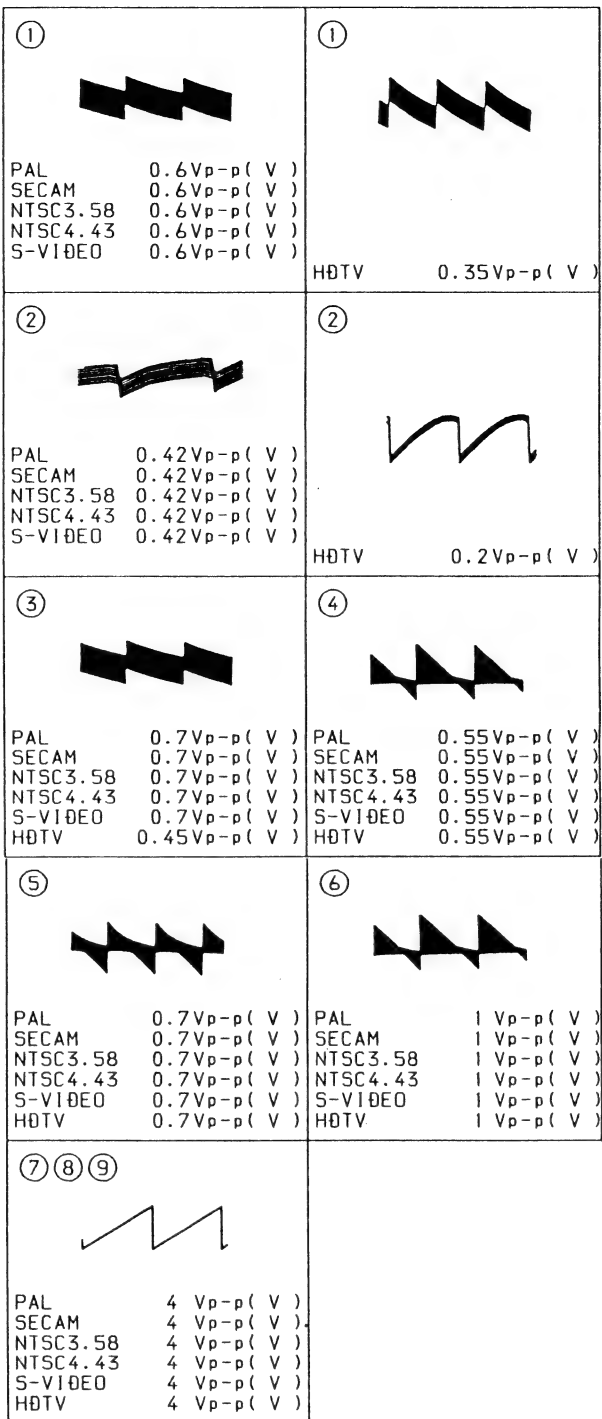
PAL	4	Vp
SECAM	4	Vp
NTSC3.58	4	Vp
NTSC4.43	4	Vp
S-VIDEO	4	Vp
HDTV	4	Vp

DB BOARD IC511 MB86023

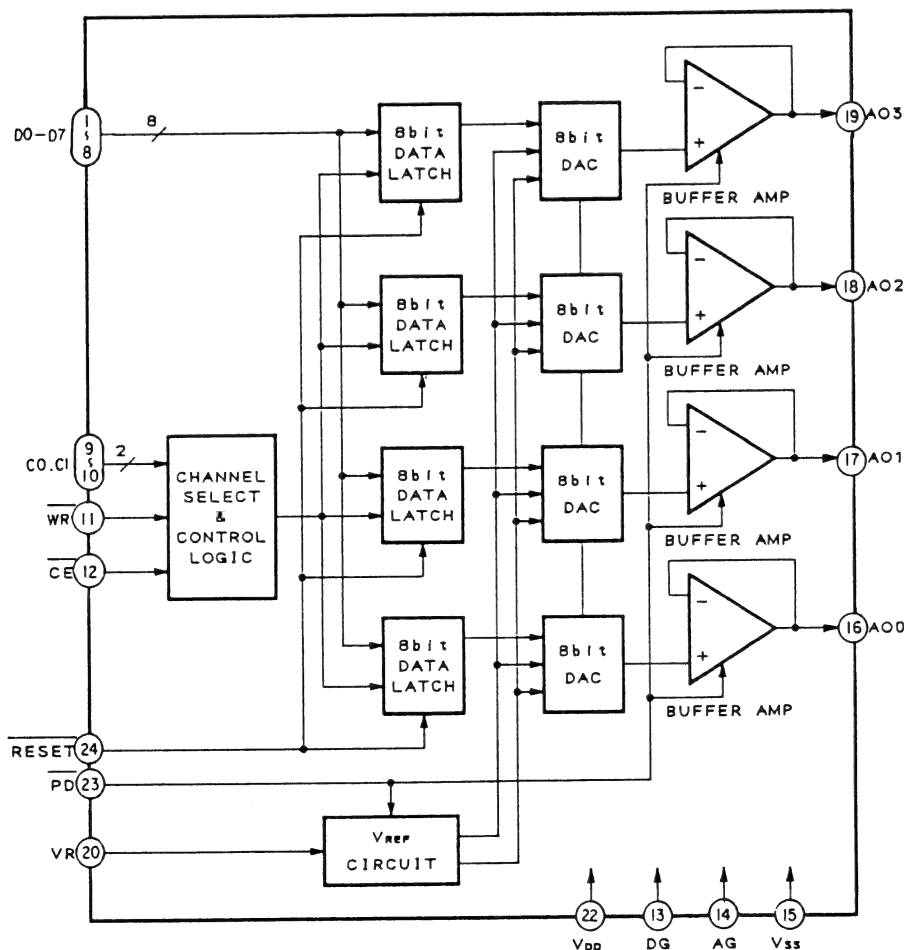


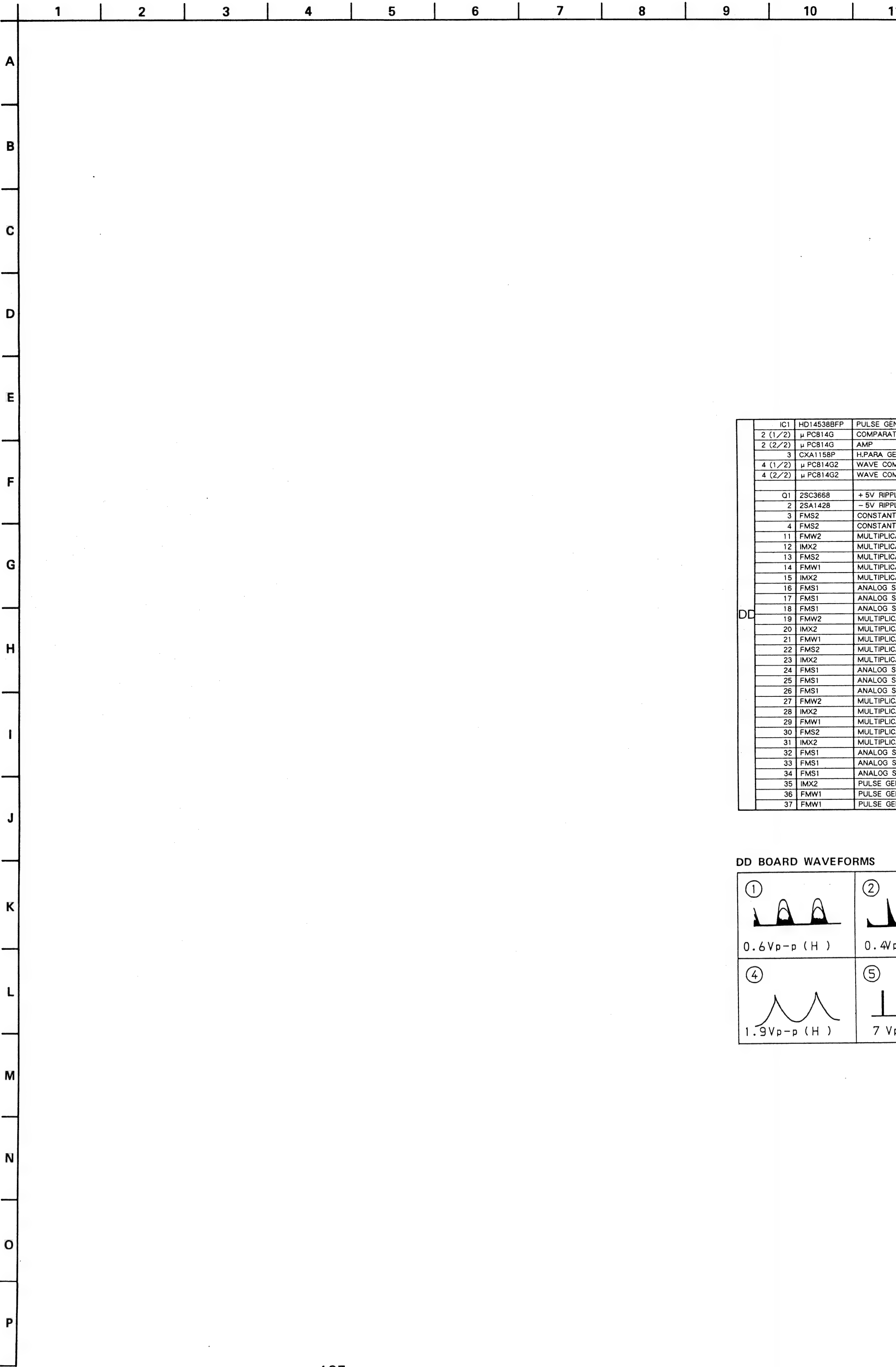
IC501	HD74HC244FP	DATA BAS BUFF-1
502	HD74HC244FP	DATA BAS BUFF-2
503	HD74HC244FP	ADD BAS BUFF-1
504	HD74HC244FP	ADD BAS BUFF-2
505	HD74HC138FP	ADD DECODE-1
506	HD74HC138FP	ADD DECODE-2
507	HD74HC138FP	ADD DECODE-3
508	HD74HC138FP	ADD DECODE-4
509	HD74HC138FP	ADD DECODE-5
510	HD74HC138FP	ADD DECODE-6
511	MB86023	H.CENT CONT-1
512	MB86023	H.CENT CONT-2
513	MB86023	H.SKEW CONT
514	MB86023	H.BOW CONT
515	MB86023	H.SIZE CONT
516	MB86023	H.LIN CONT
517	MB86023	H.KEYS CONT
518	MB86023	H.PIN CONT
519	MB86023	V.CENT CONT-1
520	MB86023	V.CENT CONT-2
521	MB86023	V.SIZE CONT
522	MB86023	V.LIN CONT
523	MB86023	V.SKEW CONT
524	MB86023	V.BOW CONT
525	MB86023	V.KEYS CONT
526	MB86023	V.PIN CONT
527	MB86023	H.ZONE-2 CONT
528	MB86023	H.ZONE-3 CONT
529	MB86023	H.ZONE-4 CONT
530	MB86023	H.ZONE-5 CONT
531	MB86023	H.ZONE-6 CONT
532	MB86023	H.ZONE-7 CONT
533	MB86023	H.ZONE-8 CONT
534	MB86023	H.ZONE-9 CONT
535	MB86023	V.ZONE-2 CONT
536	MB86023	V.ZONE-3 CONT
537	MB86023	V.ZONE-4 CONT
538	MB86023	V.ZONE-5 CONT
539	MB86023	V.ZONE-6 CONT
540	MB86023	V.ZONE-7 CONT
541	MB86023	V.ZONE-8 CONT
542	MB86023	V.ZONE-9 CONT
543	MB86023	USER CONT
544	MB86023	DRV CONT
545	MB86023	BKG CONT
546	MB86023	BLK CONT
547	μ PC4558G	V.OUT BUFF-1
548	μ PC4558G	V.OUT BUFF-2
549	μ PC814G	SUB OUT BUFF-1
550	μ PC814G	SUB OUT BUFF-2
551	μ PC814G	SUB OUT BUFF-3
552	μ PC1093T	STAND VOLT REG
DB		
D501	V06C	LEVEL SHIFT-1
502	V06C	LEVEL SHIFT-2
503	1SS123	PROT-1
504	1SS123	PROT-2
505	1SS123	PROT-3
506	1SS123	PROT-4
507	1SS123	PROT-5
508	1SS123	PROT-6

DB BOARD WAVEFORMS



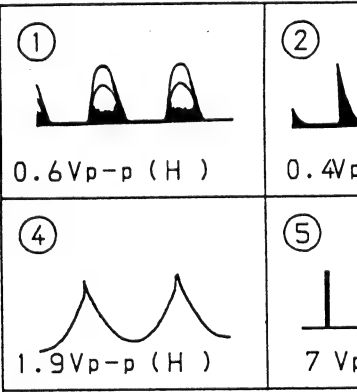
DB BOARD IC511 MB86023





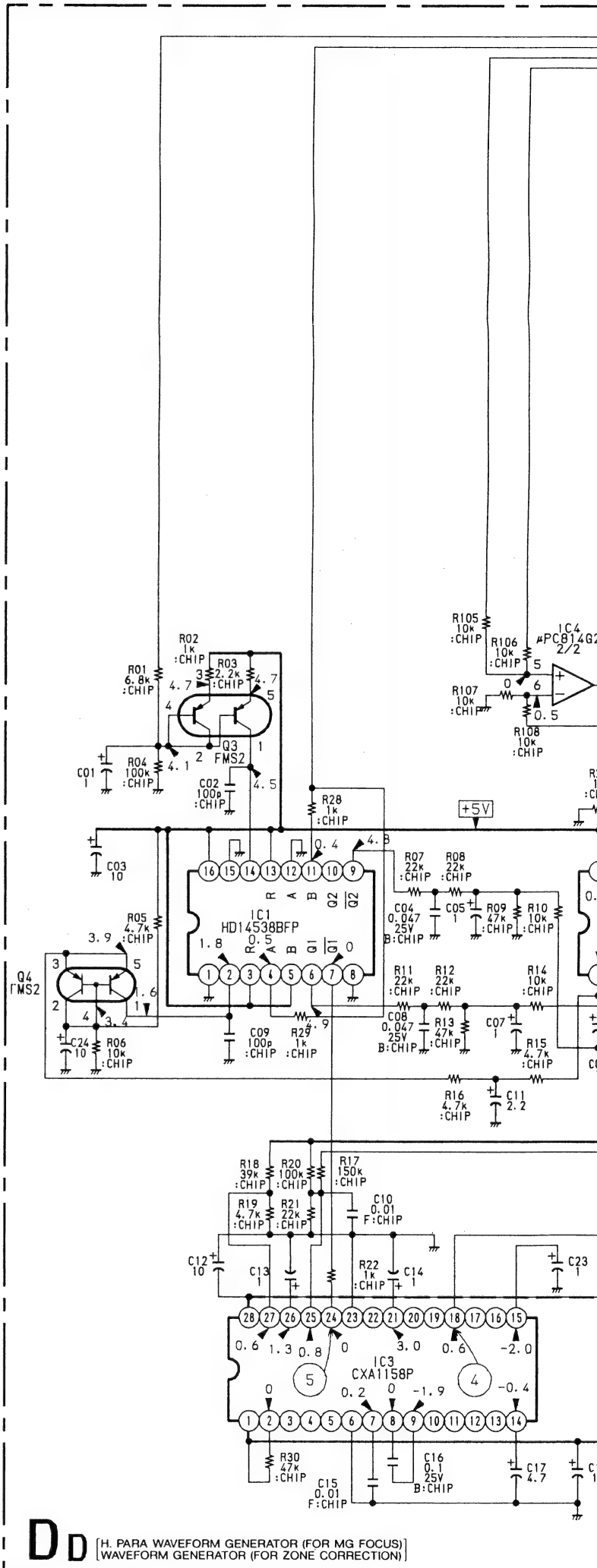
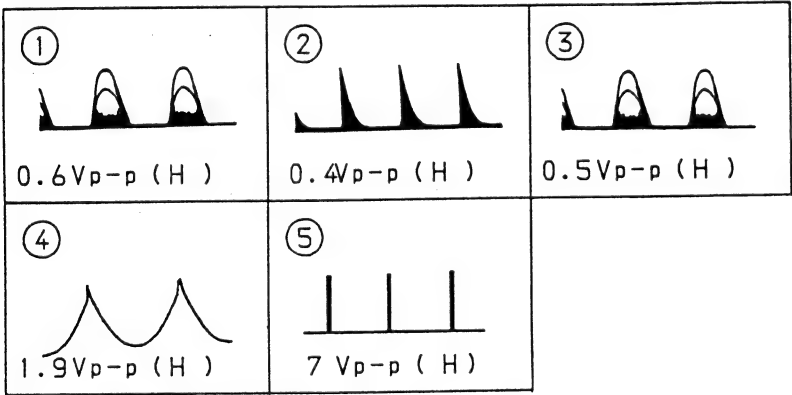
IC1	HD14538BFP	PULSE GEN
2 (1/2)	μ PC814G	COMPARAT
2 (2/2)	μ PC814G	AMP
3	CXA1158P	H.PARA GE
4 (1/2)	μ PC814G2	WAVE COM
4 (2/2)	μ PC814G2	WAVE COM
Q1	2SC3668	+ 5V RIPPL
2	2SA1428	- 5V RIPPL
3	FMS2	CONSTANT
4	FMS2	CONSTANT
11	FMW2	MULTIPLIC
12	IMX2	MULTIPLIC
13	FMS2	MULTIPLIC
14	FMW1	MULTIPLIC
15	IMX2	MULTIPLIC
16	FMS1	ANALOG S
17	FMS1	ANALOG S
18	FMS1	ANALOG S
19	FMW2	MULTIPLIC
20	IMX2	MULTIPLIC
21	FMW1	MULTIPLIC
22	FMS2	MULTIPLIC
23	IMX2	MULTIPLIC
24	FMS1	ANALOG S
25	FMS1	ANALOG S
26	FMS1	ANALOG S
27	FMW2	MULTIPLIC
28	IMX2	MULTIPLIC
29	FMW1	MULTIPLIC
30	FMS2	MULTIPLIC
31	IMX2	MULTIPLIC
32	FMS1	ANALOG S
33	FMS1	ANALOG S
34	FMS1	ANALOG S
35	IMX2	PULSE GE
36	FMW1	PULSE GE
37	FMW1	PULSE GE

DD BOARD WAVEFORMS



IC1	HD14538BFP	PULSE GENERATOR (For PHASE SHIFT)
2 (1/2)	μ PC814G	COMPARATOR • INTEGRAL
2 (2/2)	μ PC814G	AMP
3	CXA1158P	H.PARA GENERATOR (For Mg FOCUS)
4 (1/2)	μ PC814G2	WAVE COMPOSITION (V SIN1, V SIN2)
4 (2/2)	μ PC814G2	WAVE COMPOSITION (H SIN1, H SIN2)
Q1	2SC3668	+ 5V RIPPLE FILTER
2	2SA1428	- 5V RIPPLE FILTER
3	FMS2	CONSTANT CURRENT
4	FMS2	CONSTANT CURRENT
11	FMW2	MULTIPLICATIVE INST (H.PARA x V SIN)
12	IMX2	MULTIPLICATIVE INST (H.PARA x V SIN)
13	FMS2	MULTIPLICATIVE INST (H.PARA x V SIN)
14	FMW1	MULTIPLICATIVE INST (H.PARA x V SIN)
15	IMX2	MULTIPLICATIVE INST (H.PARA x V SIN)
16	FMS1	ANALOG SW
17	FMS1	ANALOG SW
18	FMS1	ANALOG SW
19	FMW2	MULTIPLICATIVE INST (H.SIN x V.PARA)
20	IMX2	MULTIPLICATIVE INST (H.SIN x V.PARA)
21	FMW1	MULTIPLICATIVE INST (H.SIN x V.PARA)
22	FMS2	MULTIPLICATIVE INST (H.SIN x V.PARA)
23	IMX2	MULTIPLICATIVE INST (H.SIN x V.PARA)
24	FMS1	ANALOG SW
25	FMS1	ANALOG SW
26	FMS1	ANALOG SW
27	FMW2	MULTIPLICATIVE INST (H.SIN x V.SIN)
28	IMX2	MULTIPLICATIVE INST (H.SIN x V.SIN)
29	FMW1	MULTIPLICATIVE INST (H.SIN x V.SIN)
30	FMS2	MULTIPLICATIVE INST (H.SIN x V.SIN)
31	IMX2	MULTIPLICATIVE INST (H.SIN x V.SIN)
32	FMS1	ANALOG SW
33	FMS1	ANALOG SW
34	FMS1	ANALOG SW
35	IMX2	PULSE GEN (For SWITCHING)
36	FMW1	PULSE GEN (For SWITCHING)
37	FMW1	PULSE GEN (For SWITCHING)

DD BOARD WAVEFORMS



DD [H. PARA WAVEFORM GENERATOR (FOR Mg FOCUS)]
WAVEFORM GENERATOR (FOR ZONE CORRECTION)

PHASE SHIFT)

Mg FOCUS)

IN1, V SIN2)

IN1, H SIN2)

PARA x V SIN)

PARA x V SIN)

PARA x V SIN)

PARA x V SIN)

PARA x V SIN)

PARA x V SIN)

SIN x V.PARA)

SIN x V.PARA)

SIN x V.PARA)

SIN x V.PARA)

SIN x V.PARA)

SIN x V.SIN)

SIN x V.SIN)

SIN x V.SIN)

SIN x V.SIN)

SIN x V.SIN)

SIN x V.SIN)

SIN x V.SIN)

NG)

NG)

NG)

③

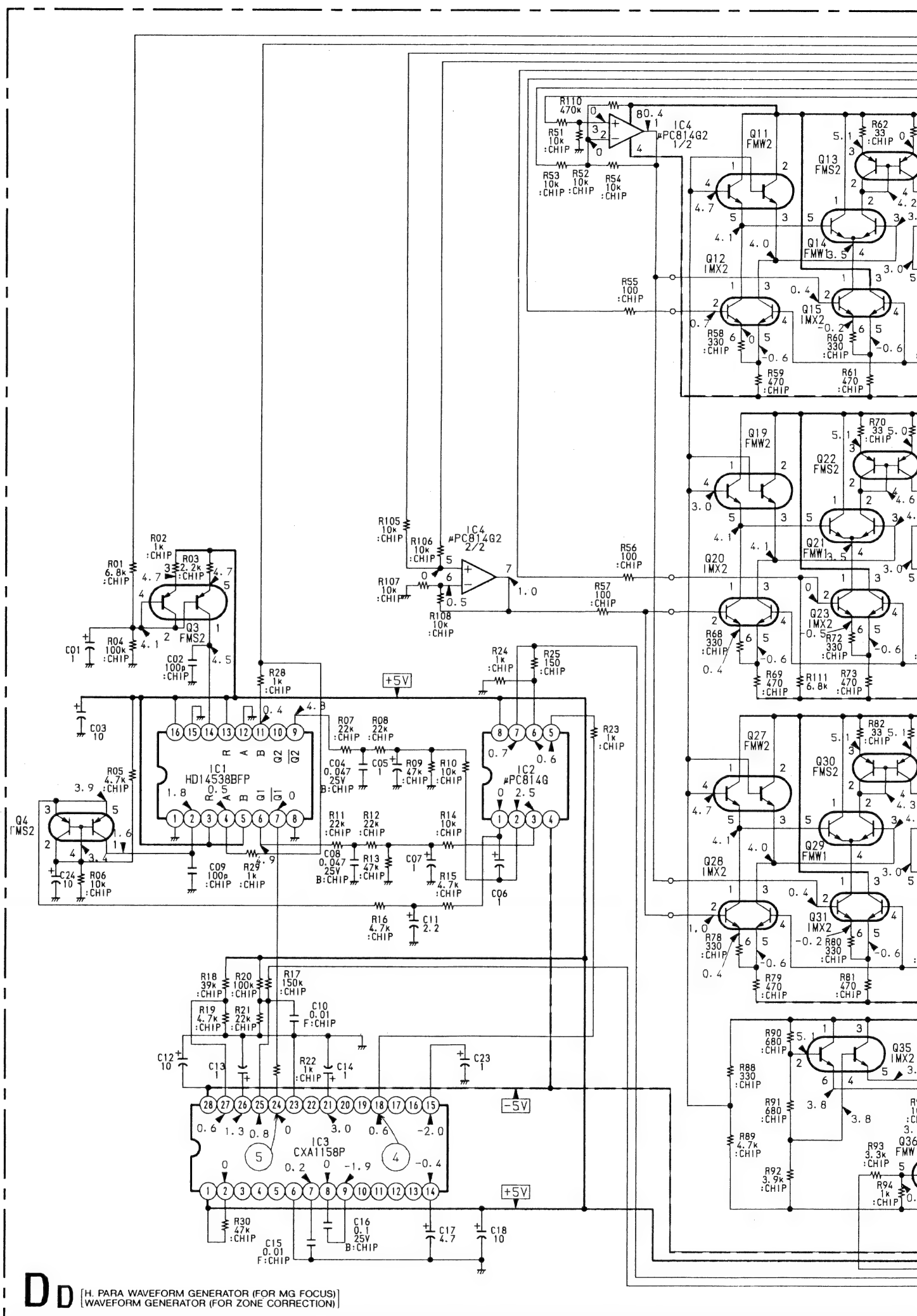


0.5Vp-p (H)

D_D

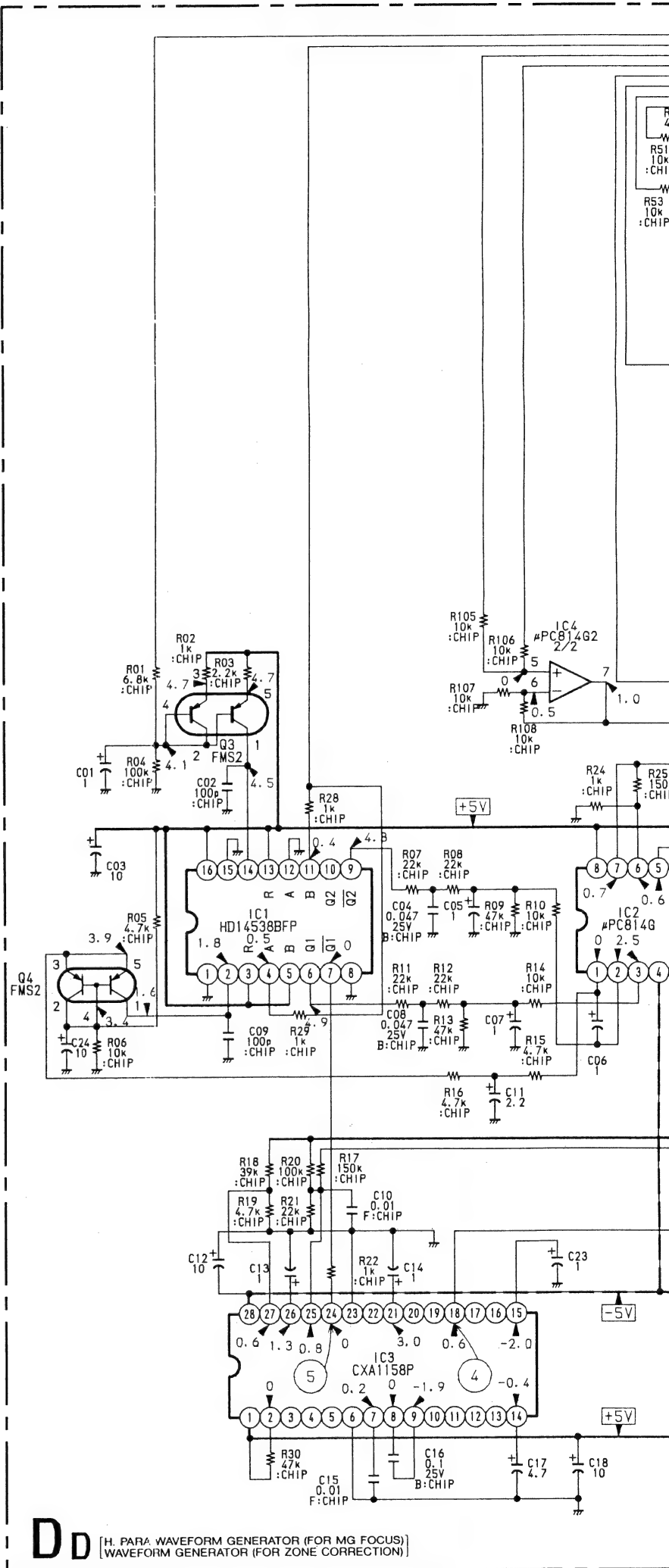
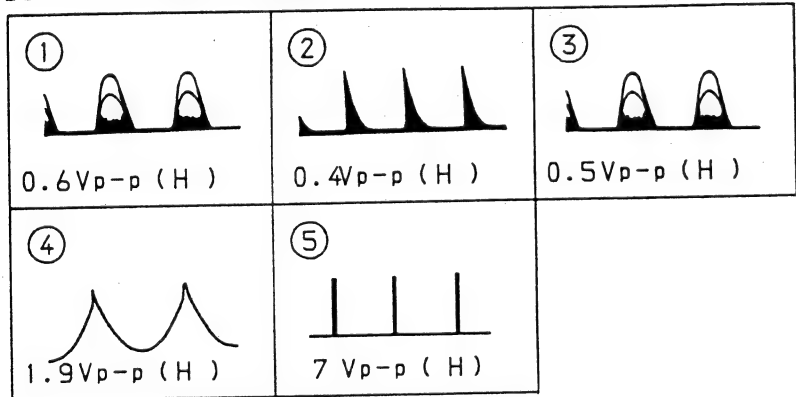
[H. PARA WAVEFORM GENERATOR (FOR MG FOCUS)]

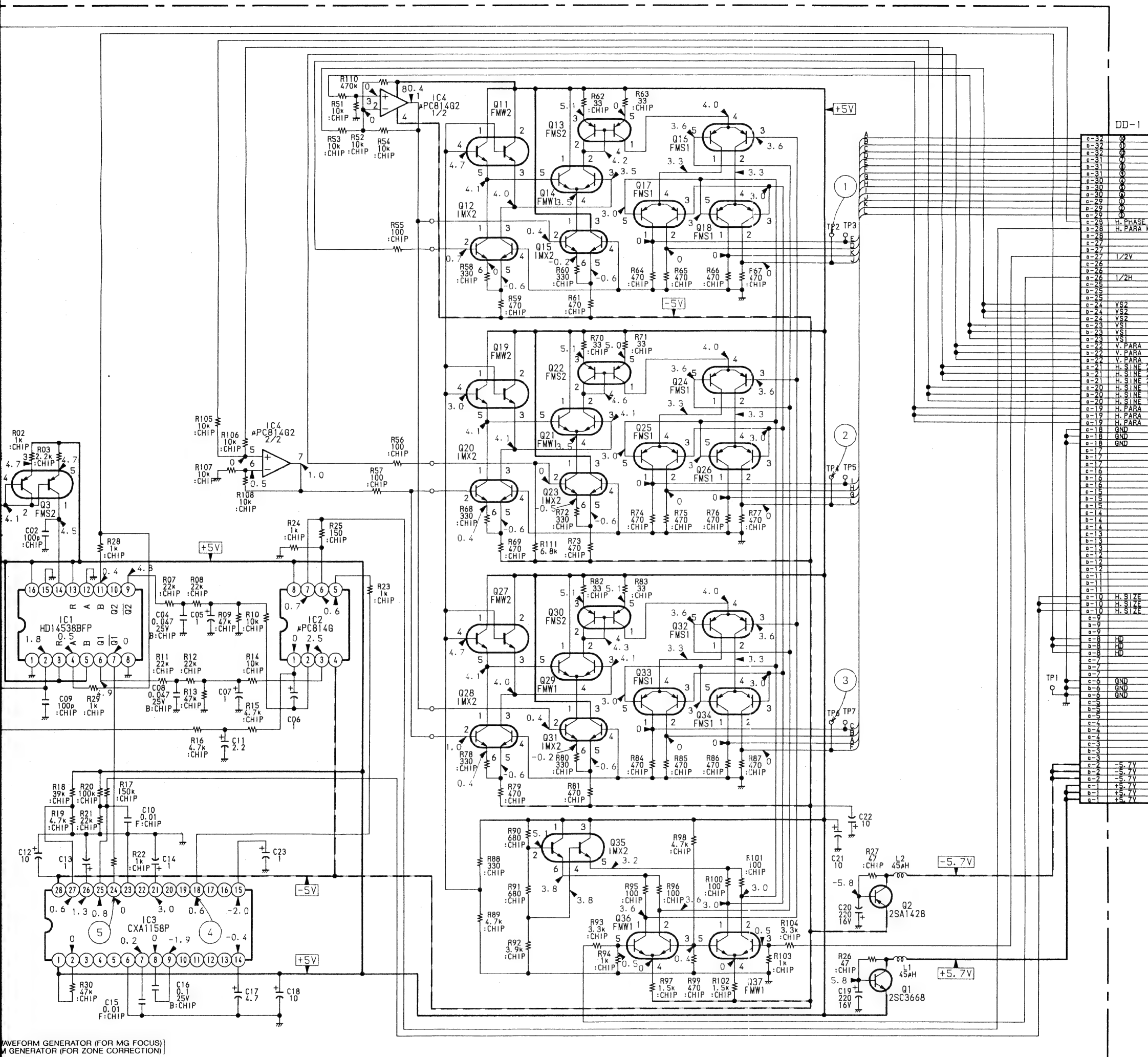
[WAVEFORM GENERATOR (FOR ZONE CORRECTION)]



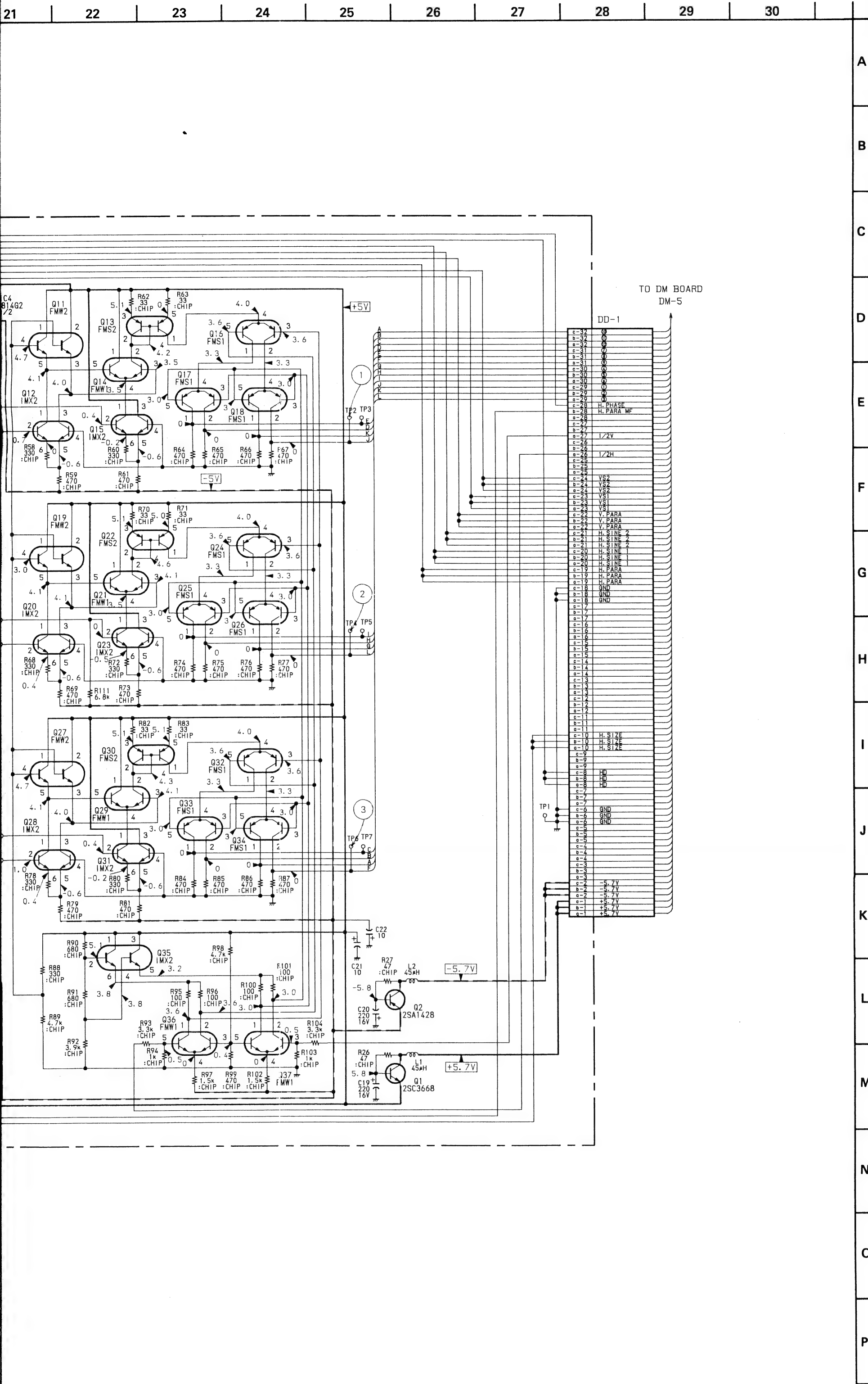
IC1	HD14538BFP	PULSE GENERATOR (For PHASE SHIFT)
2 (1/2)	μ PC814G	COMPARATOR - INTEGRAL
2 (2/2)	μ PC814G	AMP
3	CXA1158P	H.PARA GENERATOR (For Mg FOCUS)
4 (1/2)	μ PC814G2	WAVE COMPOSITION (V SIN1, V SIN2)
4 (2/2)	μ PC814G2	WAVE COMPOSITION (H SIN1, H SIN2)
Q1	2SC3668	+5V RIPPLE FILTER
2	2SA1428	-5V RIPPLE FILTER
3	FMS2	CONSTANT CURRENT
4	FMS2	CONSTANT CURRENT
11	FMW2	MULTIPLICATIVE INST (H.PARA x V SIN)
12	IMX2	MULTIPLICATIVE INST (H.PARA x V SIN)
13	FMS2	MULTIPLICATIVE INST (H.PARA x V SIN)
14	FMW1	MULTIPLICATIVE INST (H.PARA x V SIN)
15	IMX2	MULTIPLICATIVE INST (H.PARA x V SIN)
16	FMS1	ANALOG SW
17	FMS1	ANALOG SW
18	FMS1	ANALOG SW
19	FMW2	MULTIPLICATIVE INST (H.SIN x V.PARA)
20	IMX2	MULTIPLICATIVE INST (H.SIN x V.PARA)
21	FMW1	MULTIPLICATIVE INST (H.SIN x V.PARA)
22	FMS2	MULTIPLICATIVE INST (H.SIN x V.PARA)
23	IMX2	MULTIPLICATIVE INST (H.SIN x V.PARA)
24	FMS1	ANALOG SW
25	FMS1	ANALOG SW
26	FMS1	ANALOG SW
27	FMW2	MULTIPLICATIVE INST (H.SIN x V.SIN)
28	IMX2	MULTIPLICATIVE INST (H.SIN x V.SIN)
29	FMW1	MULTIPLICATIVE INST (H.SIN x V.SIN)
30	FMS2	MULTIPLICATIVE INST (H.SIN x V.SIN)
31	IMX2	MULTIPLICATIVE INST (H.SIN x V.SIN)
32	FMS1	ANALOG SW
33	FMS1	ANALOG SW
34	FMS1	ANALOG SW
35	IMX2	PULSE GEN (For SWITCHING)
36	FMW1	PULSE GEN (For SWITCHING)
37	FMW1	PULSE GEN (For SWITCHING)

DD BOARD WAVEFORMS





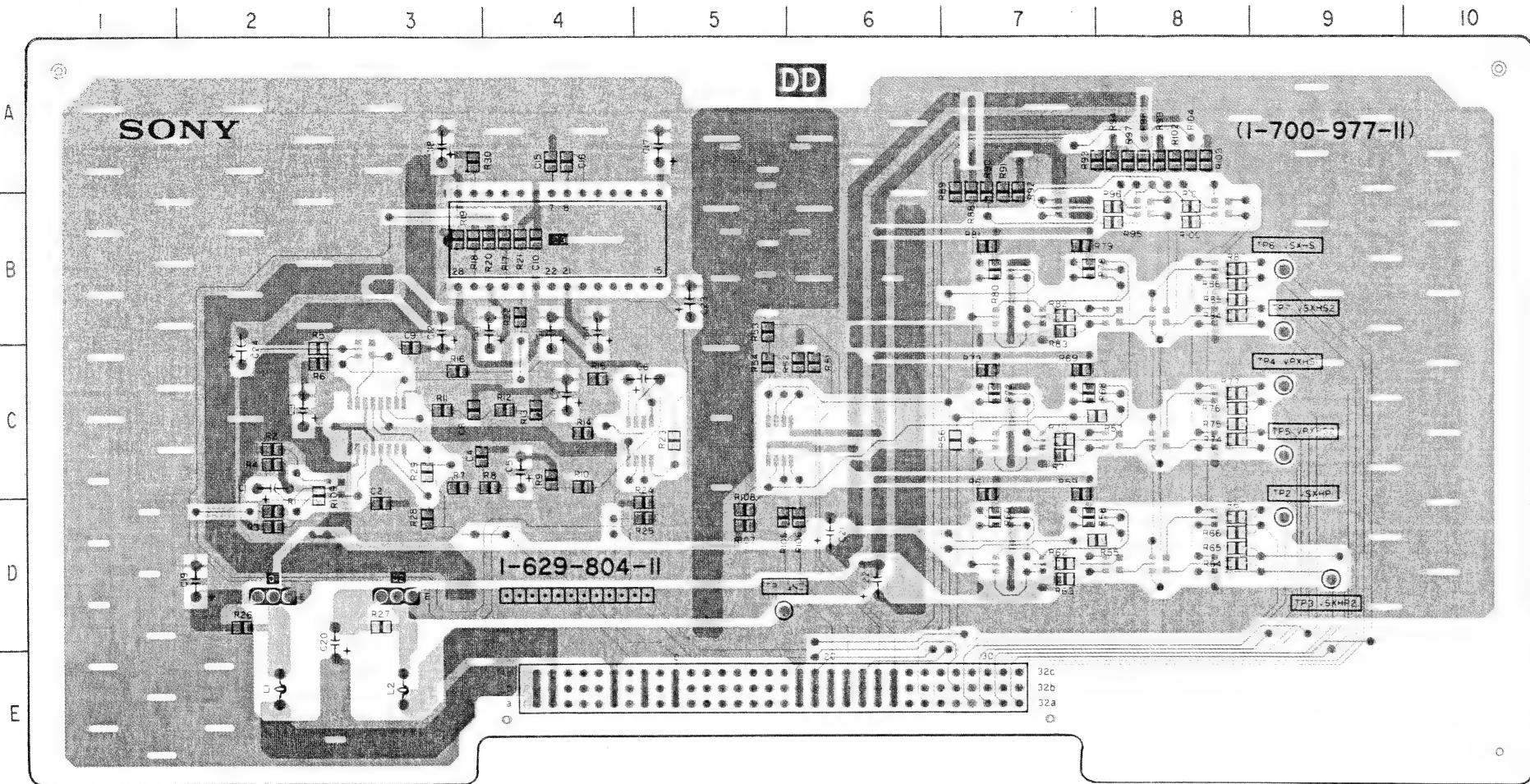
WAVEFORM GENERATOR (FOR MG FOCUS)
WAVEFORM GENERATOR (FOR ZONE CORRECTION)



DD

H. PARA WAVEFORM GENERATOR (FOR MG FOCUS)
WAVEFORM GENERATOR (FOR ZONE CORRECTION)

– DD Board – (Conductor Side)

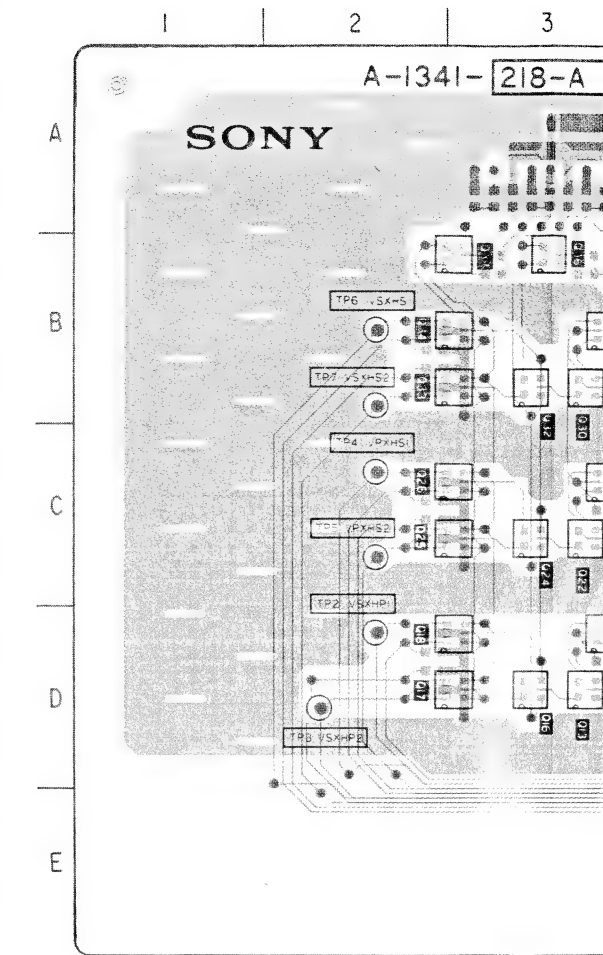


DD BOARD

IC		
CONDUCTOR SIDE		COMPONENT SIDE
IC1		C-8
IC2		C-6
IC3	B-4	
IC4		C-5

TRANSISTOR		
CONDUCTOR SIDE		COMPONENT SIDE
Q1	D-2	D-9
Q2	D-3	D-8
Q3		C-8
Q4		C-8
Q11		D-4
Q12		D-4
Q13		D-3
Q14		D-4
Q15		D-4
Q16		D-3
Q17		D-3
Q18		D-3
Q19		C-4
Q20		C-3
Q21		C-4
Q22		C-3
Q23		C-4
Q24		C-3
Q25		C-3
Q26		C-3
Q27		B-4
Q28		B-3
Q29		B-4
Q30		B-3
Q31		B-4
Q32		B-3
Q33		B-3
Q34		B-3
Q35		B-4
Q36		B-3
Q37		B-3

– DD Board – (Component Side)



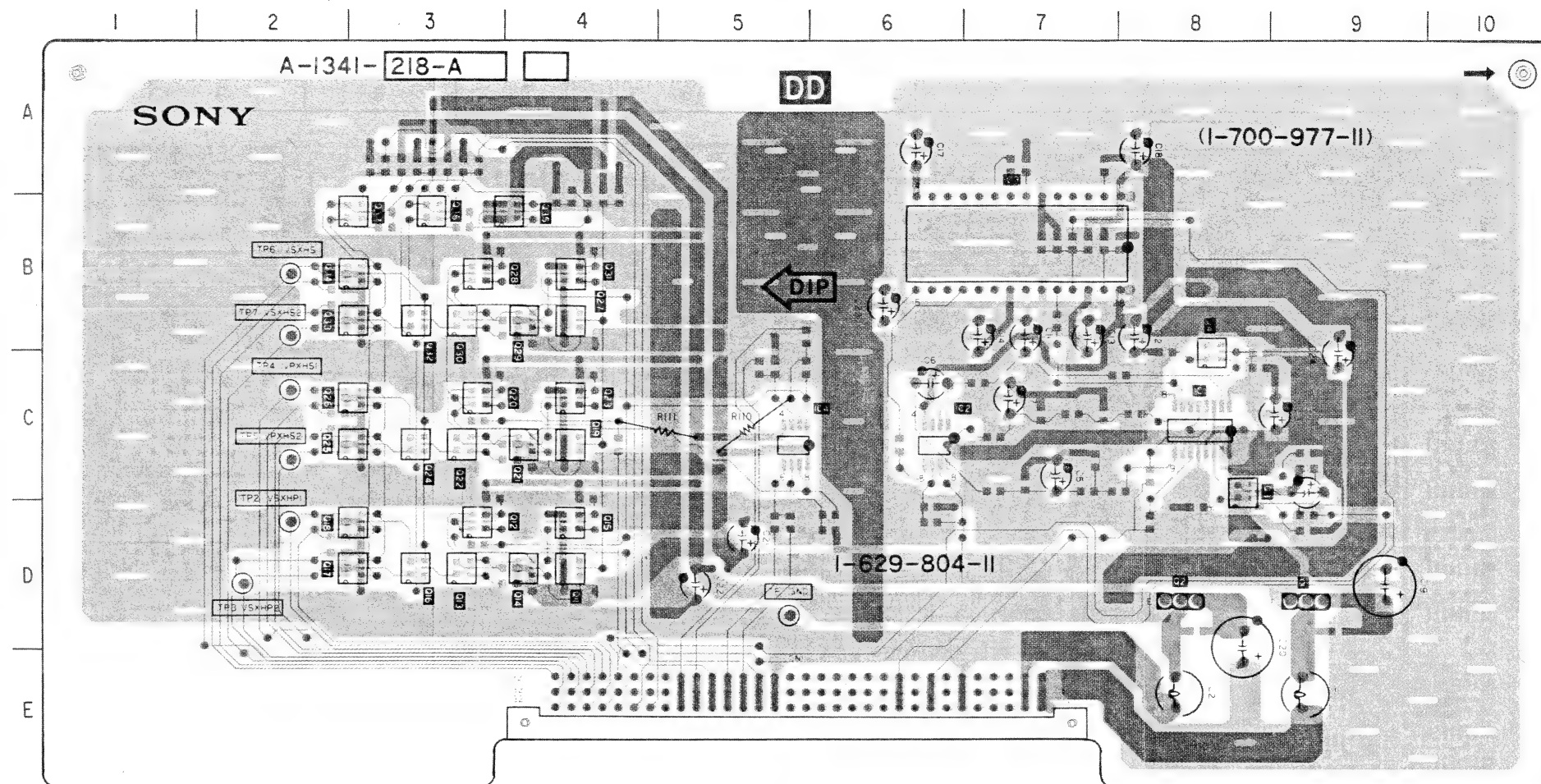
Dd

H. PARA WAVEFORM GENERATOR (FOR MG FOCUS)
WAVEFORM GENERATOR (FOR ZONE CORRECTION)

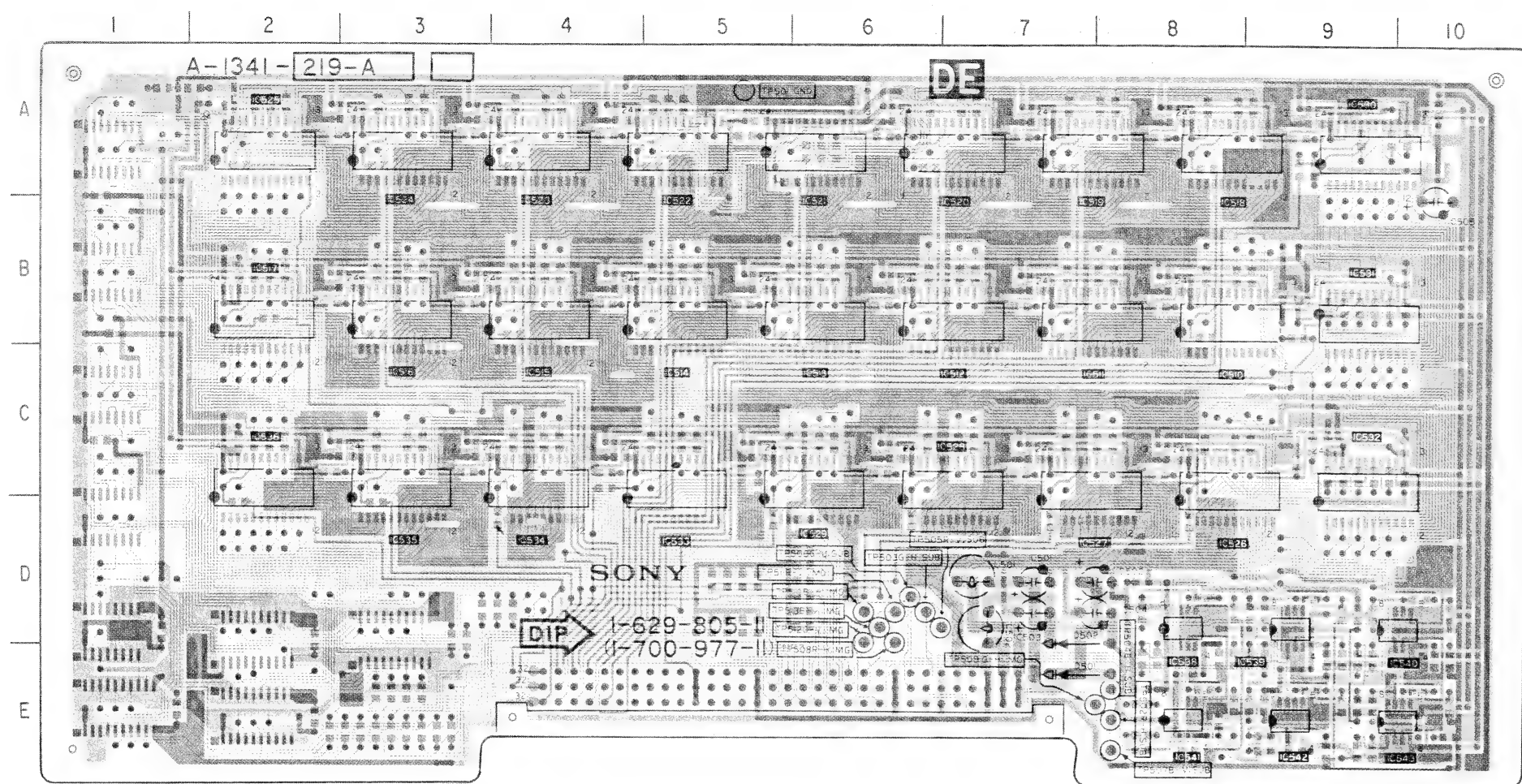
DD BOARD

— DD Board — (Component Side)

IC		
	CONDUCTOR SIDE	COMPONENT SIDE
IC1		C-8
IC2		C-6
IC3	B-4	
IC4		C-5
TRANSISTOR		
	CONDUCTOR SIDE	COMPONENT SIDE
Q1	D-2	D-9
Q2	D-3	D-8
Q3		C-8
Q4		C-8
Q11		D-4
Q12		D-4
Q13		D-3
Q14		D-4
Q15		D-4
Q16		D-3
Q17		D-3
Q18		D-3
Q19		C-4
Q20		C-3
Q21		C-4
Q22		C-3
Q23		C-4
Q24		C-3
Q25		C-3
Q26		C-3
Q27		B-4
Q28		B-3
Q29		B-4
Q30		B-3
Q31		B-4
Q32		B-3
Q33		B-3
Q34		B-3
Q35		B-4
Q36		B-3
Q37		B-3



— DE Board — (Component Side)

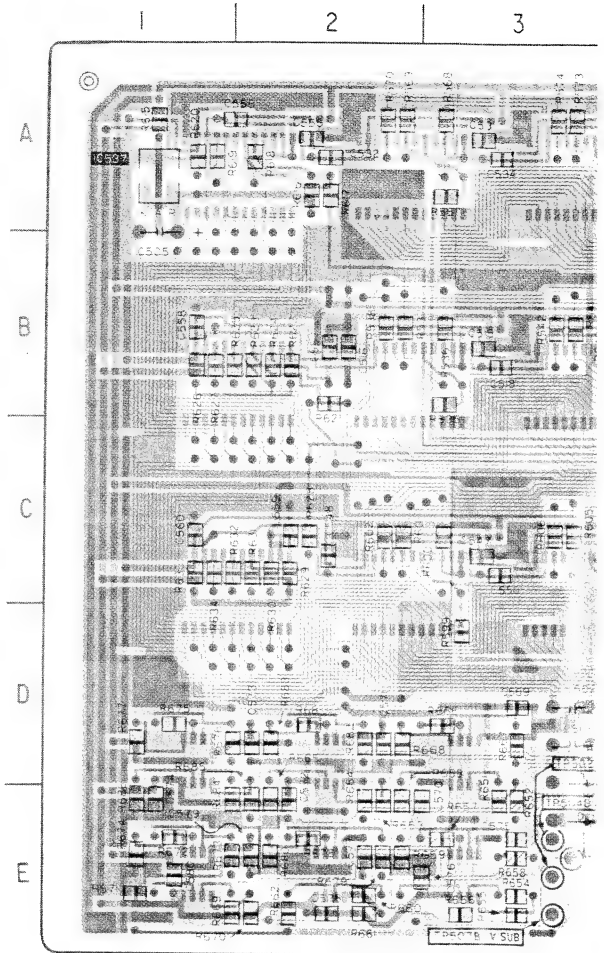


DE BOARD

IC		
	CONDUCTOR SIDE	COMPONENT SIDE
IC501	D-8	
IC502	D-9	
IC503	E-9	
IC504	E-10	
IC505	D-10	
IC506	A-10	
IC507	C-10	
IC508	D-10	
IC509	C-10	
IC510		B-8
IC511		B-7
IC512		B-7
IC513		B-6
IC514		B-5
IC515		B-4
IC516		B-3
IC517		B-2
IC518		A-8
IC519		A-7
IC520		A-7
IC521		A-6
IC522		A-5
IC523		A-4
IC524		A-3
IC525		A-2
IC526		C-8
IC527		C-7
IC528		C-7
IC529		C-6
IC530		A-9
IC531		B-9
IC532		C-9
IC533		C-5
IC534		C-4
IC535		C-3
IC536		C-2
IC537	A-1	
IC538		D-8
IC539		D-9
IC540		B-10
IC541		E-8
IC542		E-9
IC543		E-10

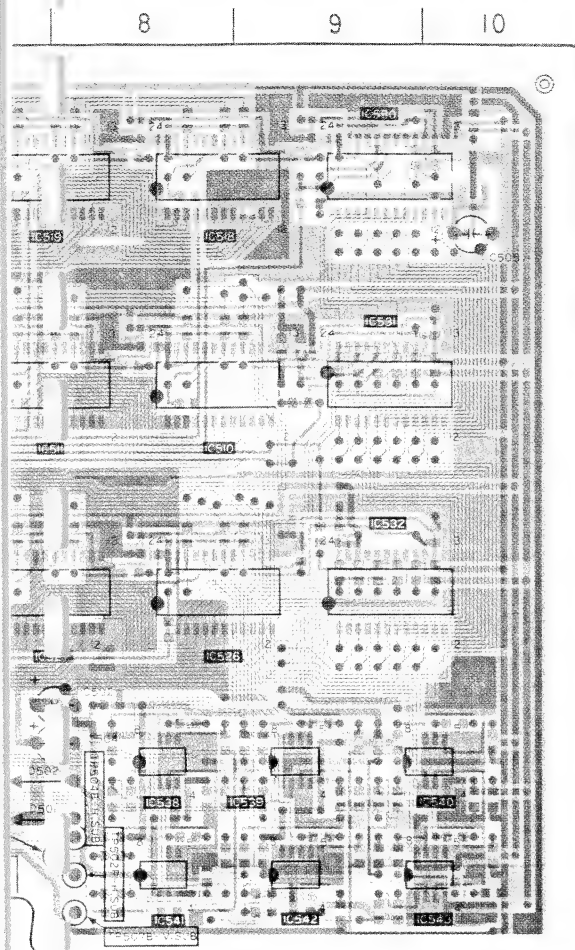
DIODE		
	CONDUCTOR SIDE	COMPONENT SIDE
D501	E-3	E-7
D502	D-3	D-7

— DE Board — (Conductor Side)

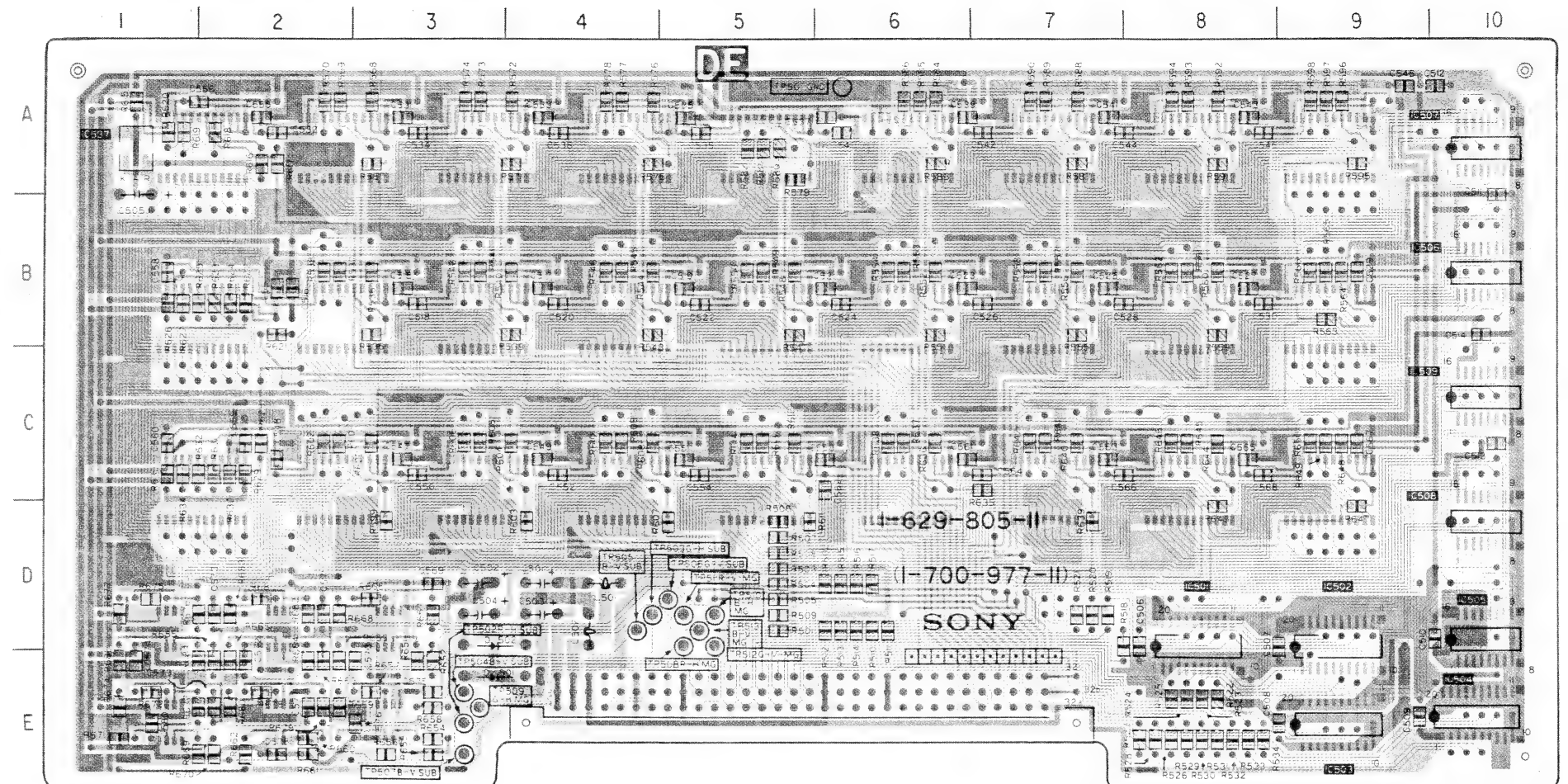


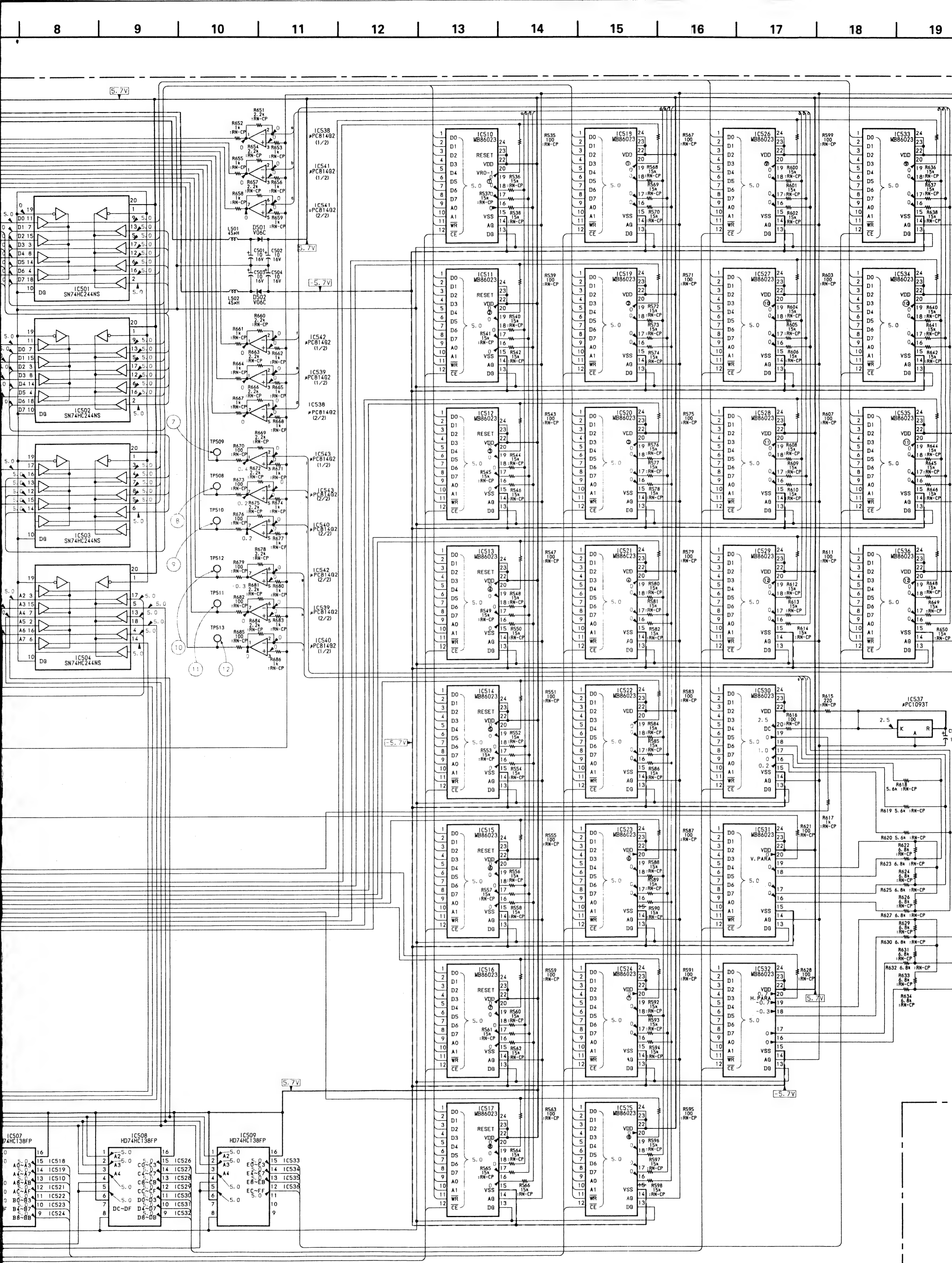
DE BOARD

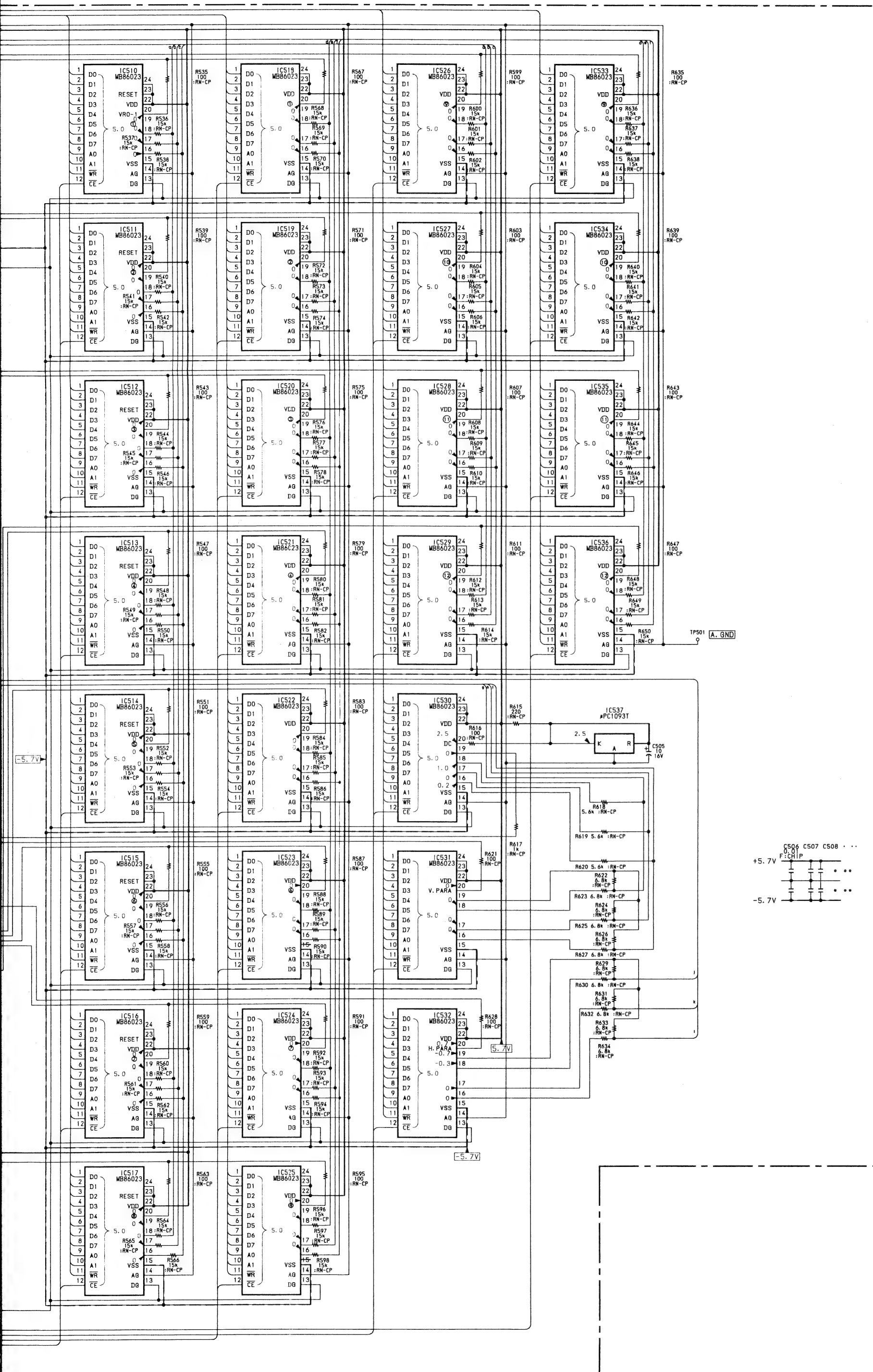
- DE Board - (Conductor Side)

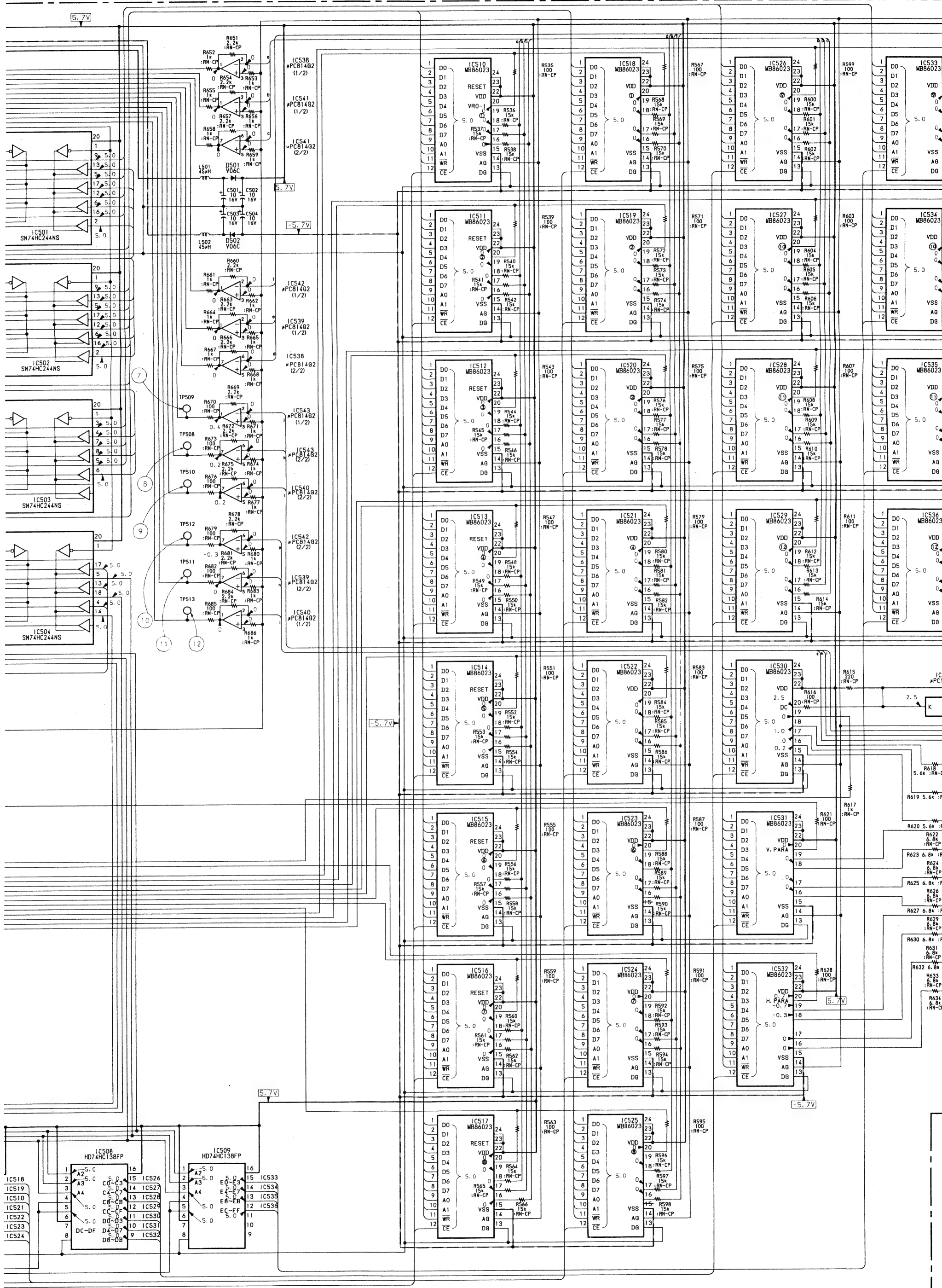


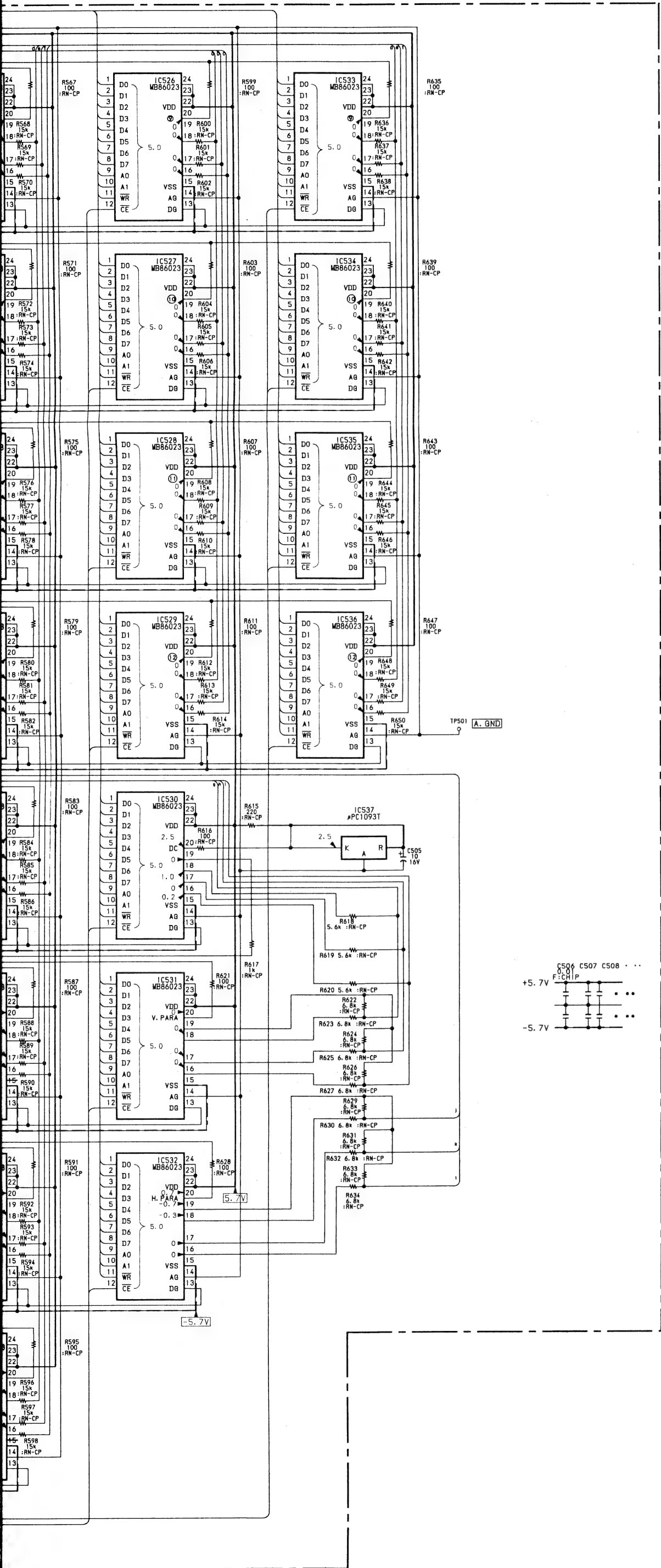
IC		
	CONDUCTOR SIDE	COMPONENT SIDE
IC501	D-8	
IC502	D-9	
IC503	E-9	
IC504	E-10	
IC505	D-10	
IC506	A-10	
IC507	C-10	
IC508	D-10	
IC509	C-10	
IC510		B-8
IC511		B-7
IC512		B-7
IC513		B-6
IC514		B-5
IC515		B-4
IC516		B-3
IC517		B-2
IC518		A-8
IC519		A-7
IC520		A-7
IC521		A-6
IC522		A-5
IC523		A-4
IC524		A-3
IC525		A-2
IC526		C-8
IC527		C-7
IC528		C-7
IC529		C-6
IC530		A-9
IC531		B-9
IC532		C-9
IC533		C-5
IC534		C-4
IC535		C-3
IC536		C-2
IC537	A-1	
IC538		D-8
IC539		D-9
IC540		B-10
IC541		E-8
IC542		E-9
IC543		E-10
DIODE		
	CONDUCTOR SIDE	COMPONENT SIDE
D501	E-3	E-7
D502	D-3	D-7











IC501	HD74HC244FP	BUFFER
502	HD74HC244FP	BUFFER
503	HD74HC244FP	BUFFER
504	HD74HC244FP	BUFFER
505	HD74HC138FP	ADDRESS DECODER
506	HD74HC138FP	ADDRESS DECODER
507	HD74HC138FP	ADDRESS DECODER
508	HD74HC138FP	ADDRESS DECODER
509	HD74HC138FP	ADDRESS DECODER
510	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
511	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
512	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
513	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
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522	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
523	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
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526	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
527	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
528	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
529	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
530	MB86023	DIGITAL ATTENUATOR (For Mg FOCUS)
531	MB86023	DIGITAL ATTENUATOR (For Mg FOCUS)
532	MB86023	DIGITAL ATTENUATOR (For Mg FOCUS)
533	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
534	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
535	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
536	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
537		
538 (1/2)	μ PC814G2	WAVE COMPOSITION (H.SUB (G))
538 (2/2)	μ PC814G2	WAVE COMPOSITION (V.SUB (G))
539 (1/2)	μ PC814G2	WAVE COMPOSITION (V.SUB (R))
539 (2/2)	μ PC814G2	WAVE COMPOSITION (V.Mg (R))
540 (1/2)	μ PC814G2	WAVE COMPOSITION (V.Mg (B))
540 (2/2)	μ PC814G2	WAVE COMPOSITION (H.Mg (B))
541 (1/2)	μ PC814G2	WAVE COMPOSITION (H.SUB (R))
541 (2/2)	μ PC814G2	WAVE COMPOSITION (H.SUB (B))
542	μ PC814G2	WAVE COMPOSITION (V.SUB (B))
543	μ PC814G2	WAVE COMPOSITION (V.SUB (B))
D501	V06C	
502	V06C	

DE BOARD WAVEFORMS

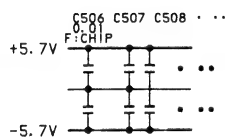
<div>①</div> <div> PAL 0.6Vp-p (V) SECAM 0.6Vp-p (V) NTSC3.58 0.6Vp-p (V) NTSC4.43 0.6Vp-p (V) S-VIÐEO 0.6Vp-p (V) </div>	<div>①</div> <div> HDTV 0.36Vp-p (V) </div>	<div>②</div> <div> PAL 1 Vp-p (V) SECAM 1 Vp-p (V) NTSC3.58 1 Vp-p (V) NTSC4.43 1 Vp-p (V) S-VIÐEO 1 Vp-p (V) HDTV 1 Vp-p (V) </div>
<div>③</div> <div> PAL 0.7Vp-p (V) SECAM 0.7Vp-p (V) NTSC3.58 0.7Vp-p (V) NTSC4.43 0.7Vp-p (V) S-VIÐEO 0.7Vp-p (V) HDTV 0.45Vp-p (V) </div>	<div>④</div> <div> PAL 1 Vp-p (V) SECAM 1 Vp-p (V) NTSC3.58 1 Vp-p (V) NTSC4.43 1 Vp-p (V) S-VIÐEO 1 Vp-p (V) HDTV 1 Vp-p (V) </div>	<div>⑤</div> <div> PAL 1 Vp-p (V) SECAM 1 Vp-p (V) NTSC3.58 1 Vp-p (V) NTSC4.43 1 Vp-p (V) S-VIÐEO 1 Vp-p (V) HDTV 1 Vp-p (V) </div>
<div>⑦</div> <div> PAL 1 Vp-p (H) SECAM 1 Vp-p (H) NTSC3.58 1 Vp-p (H) NTSC4.43 1 Vp-p (H) S-VIÐEO 1 Vp-p (H) HDTV 1 Vp-p (H) </div>	<div>⑧</div> <div> PAL 0.7Vp-p (H) SECAM 0.7Vp-p (H) NTSC3.58 0.7Vp-p (H) NTSC4.43 0.7Vp-p (H) S-VIÐEO 0.7Vp-p (H) HDTV 0.7Vp-p (H) </div>	<div>⑨</div> <div> PAL 0.7Vp-p (H) SECAM 0.7Vp-p (H) NTSC3.58 0.7Vp-p (H) NTSC4.43 0.7Vp-p (H) S-VIÐEO 0.7Vp-p (H) HDTV 0.7Vp-p (H) </div>
<div>⑪⑫</div> <div> PAL 0.1Vp-p (V) SECAM 0.1Vp-p (V) NTSC3.58 0.1Vp-p (V) NTSC4.43 0.1Vp-p (V) S-VIÐEO 0.1Vp-p (V) HDTV 0.1Vp-p (V) </div>		

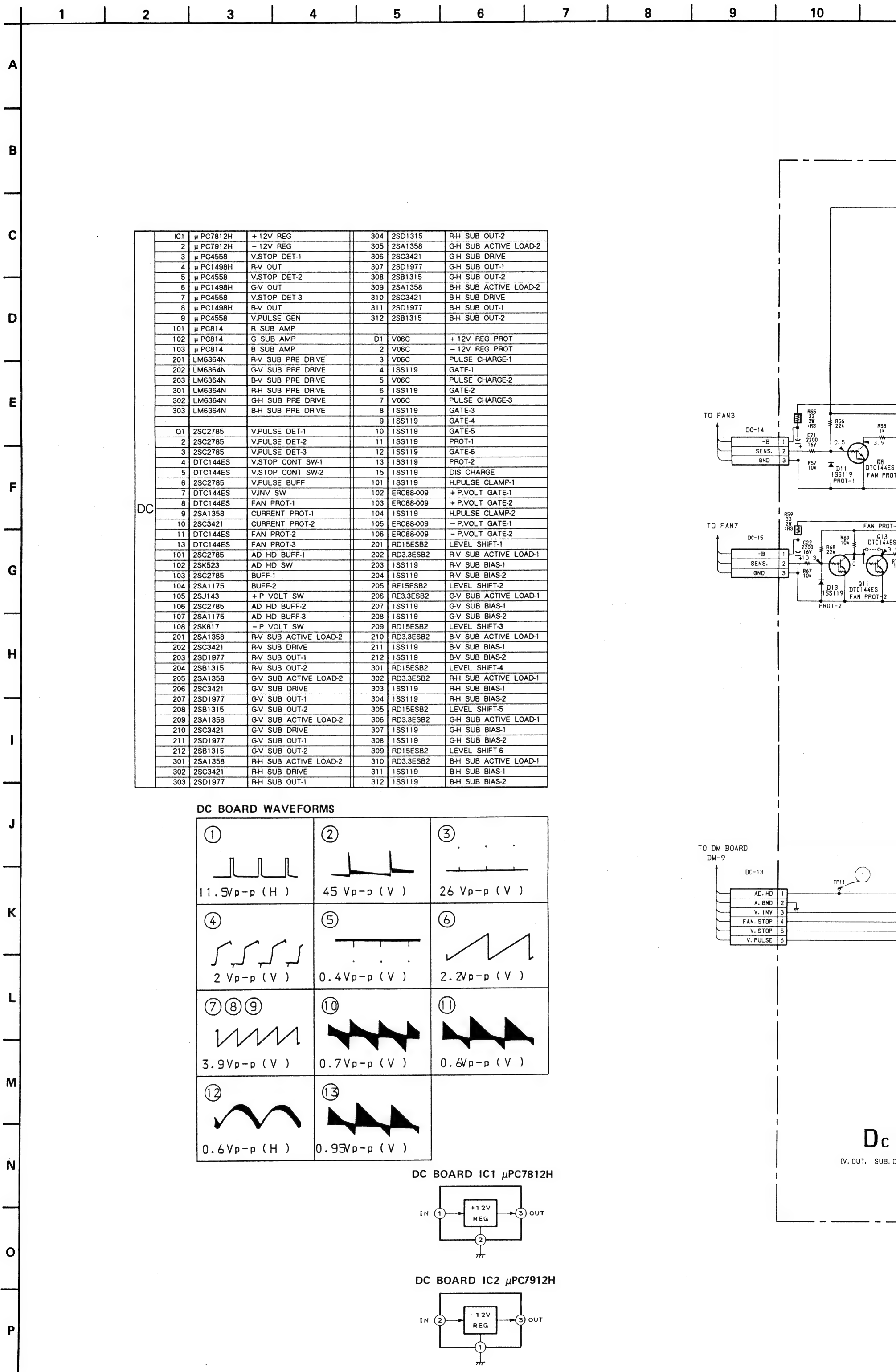
IC501	HD74HC244FP	BUFFER
502	HD74HC244FP	BUFFER
503	HD74HC244FP	BUFFER
504	HD74HC244FP	BUFFER
505	HD74HC138FP	ADDRESS DECODER
506	HD74HC138FP	ADDRESS DECODER
507	HD74HC138FP	ADDRESS DECODER
508	HD74HC138FP	ADDRESS DECODER
509	HD74HC138FP	ADDRESS DECODER
510	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
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530	MB86023	DIGITAL ATTENUATOR (For Mg FOCUS)
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533	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
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535	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
536	MB86023	DIGITAL ATTENUATOR (For ZONE CORR WAVE)
537		
538 (1/2)	μ PC814G2	WAVE COMPOSITION (H.SUB (G))
538 (2/2)	μ PC814G2	WAVE COMPOSITION (V.SUB (G))
539 (1/2)	μ PC814G2	WAVE COMPOSITION (V.SUB (R))
539 (2/2)	μ PC814G2	WAVE COMPOSITION (V.Mg (R))
540 (1/2)	μ PC814G2	WAVE COMPOSITION (V.Mg (B))
540 (2/2)	μ PC814G2	WAVE COMPOSITION (H.Mg (B))
541 (1/2)	μ PC814G2	WAVE COMPOSITION (H.SUB (R))
541 (2/2)	μ PC814G2	WAVE COMPOSITION (H.SUB (B))
542	μ PC814G2	WAVE COMPOSITION (V.SUB (B))
543	μ PC814G2	WAVE COMPOSITION (V.SUB (B))
D501	V06C	
502	V06C	

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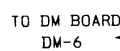
DE BOARD WAVEFORMS

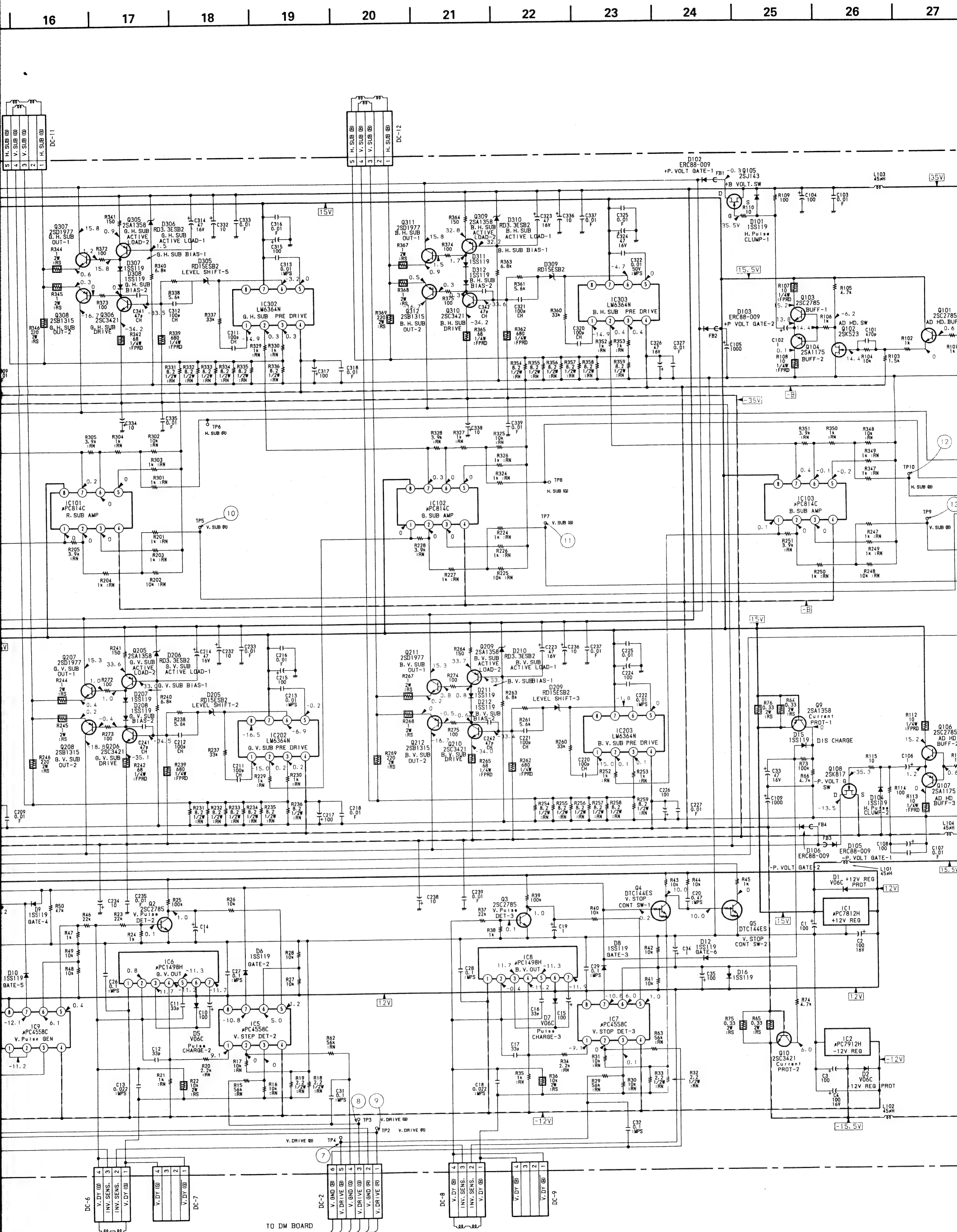
<p>①</p> <p>PAL 0.6Vp-p (V) SECAM 0.6Vp-p (V) NTSC3.58 0.6Vp-p (V) NTSC4.43 0.6Vp-p (V) S-VIDEO 0.6Vp-p (V)</p>	<p>①</p> <p>HDTV 0.36Vp-p (V)</p>	<p>②</p> <p>PAL 0.45Vp-p (V) SECAM 0.45Vp-p (V) NTSC3.58 0.45Vp-p (V) NTSC4.43 0.45Vp-p (V) S-VIDEO 0.45Vp-p (V)</p>	<p>②</p> <p>HDTV 0.2Vp-p (V)</p>
<p>③</p> <p>PAL 0.7Vp-p (V) SECAM 0.7Vp-p (V) NTSC3.58 0.7Vp-p (V) NTSC4.43 0.7Vp-p (V) S-VIDEO 0.7Vp-p (V) HDTV 0.49Vp-p (V)</p>	<p>④</p> <p>PAL 1 Vp-p (V) SECAM 1 Vp-p (V) NTSC3.58 1 Vp-p (V) NTSC4.43 1 Vp-p (V) S-VIDEO 1 Vp-p (V) HDTV 1 Vp-p (V)</p>	<p>⑤</p> <p>PAL 0.72Vp-p (V) SECAM 0.72Vp-p (V) NTSC3.58 0.72Vp-p (V) NTSC4.43 0.72Vp-p (V) S-VIDEO 0.72Vp-p (V) HDTV 0.72Vp-p (V)</p>	<p>⑥</p> <p>PAL 0.6Vp-p (V) SECAM 0.6Vp-p (V) NTSC3.58 0.6Vp-p (V) NTSC4.43 0.6Vp-p (V) S-VIDEO 0.6Vp-p (V) HDTV 0.6Vp-p (V)</p>
<p>⑦</p> <p>PAL 1 Vp-p (H) SECAM 1 Vp-p (H) NTSC3.58 1 Vp-p (H) NTSC4.43 1 Vp-p (H) S-VIDEO 1 Vp-p (H) HDTV 1 Vp-p (H)</p>	<p>⑧</p> <p>PAL 0.7Vp-p (H) SECAM 0.7Vp-p (H) NTSC3.58 0.7Vp-p (H) NTSC4.43 0.7Vp-p (H) S-VIDEO 0.7Vp-p (H) HDTV 0.7Vp-p (H)</p>	<p>⑨</p> <p>PAL 0.7Vp-p (H) SECAM 0.7Vp-p (H) NTSC3.58 0.7Vp-p (H) NTSC4.43 0.7Vp-p (H) S-VIDEO 0.7Vp-p (H) HDTV 0.7Vp-p (H)</p>	<p>⑩</p> <p>PAL 0.1Vp-p (V) SECAM 0.1Vp-p (V) NTSC3.58 0.1Vp-p (V) NTSC4.43 0.1Vp-p (V) S-VIDEO 0.1Vp-p (V) HDTV 0.1Vp-p (V)</p>
<p>⑪⑫</p> <p>PAL 0.1Vp-p (V) SECAM 0.1Vp-p (V) NTSC3.58 0.1Vp-p (V) NTSC4.43 0.1Vp-p (V) S-VIDEO 0.1Vp-p (V) HDTV 0.1Vp-p (V)</p>			

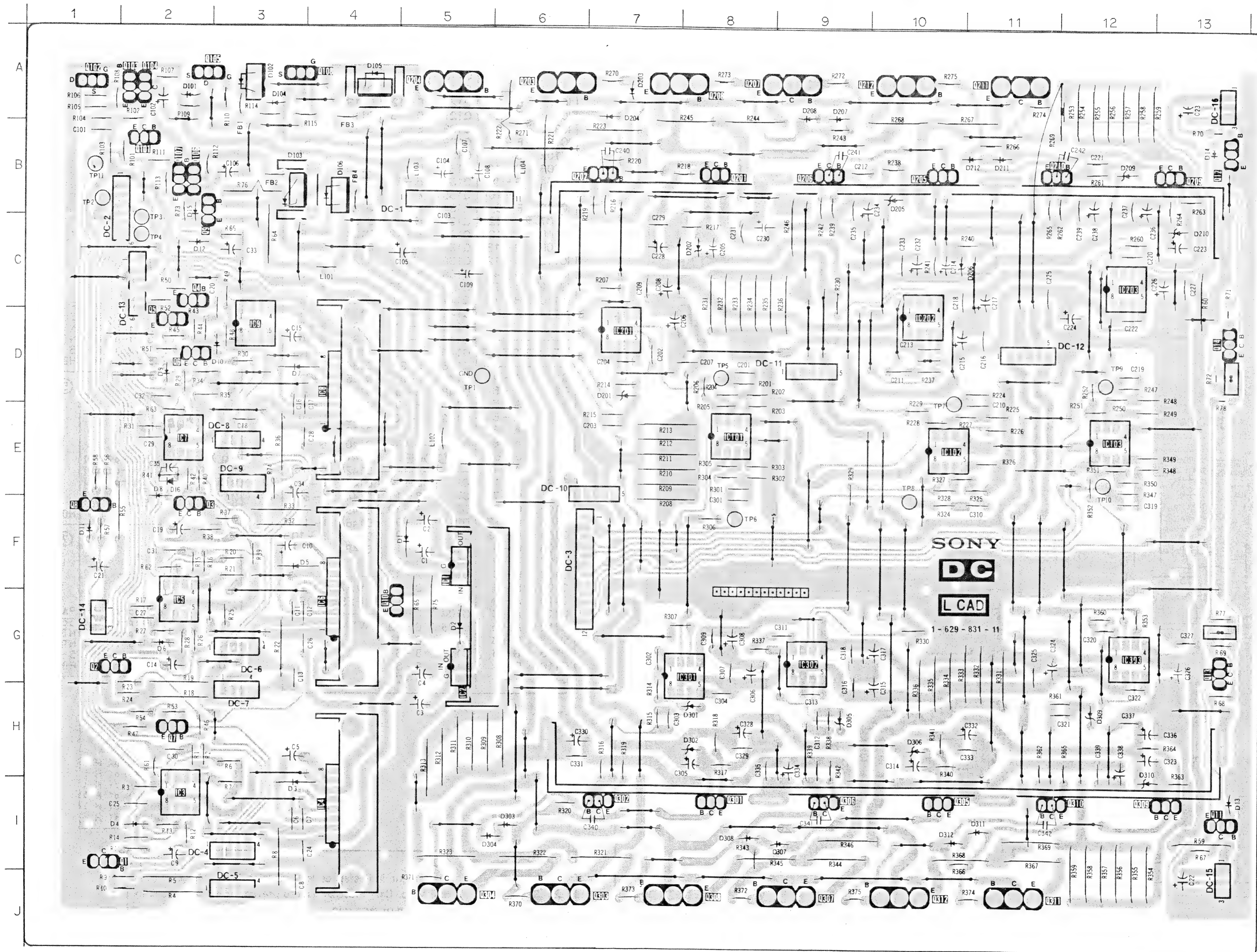








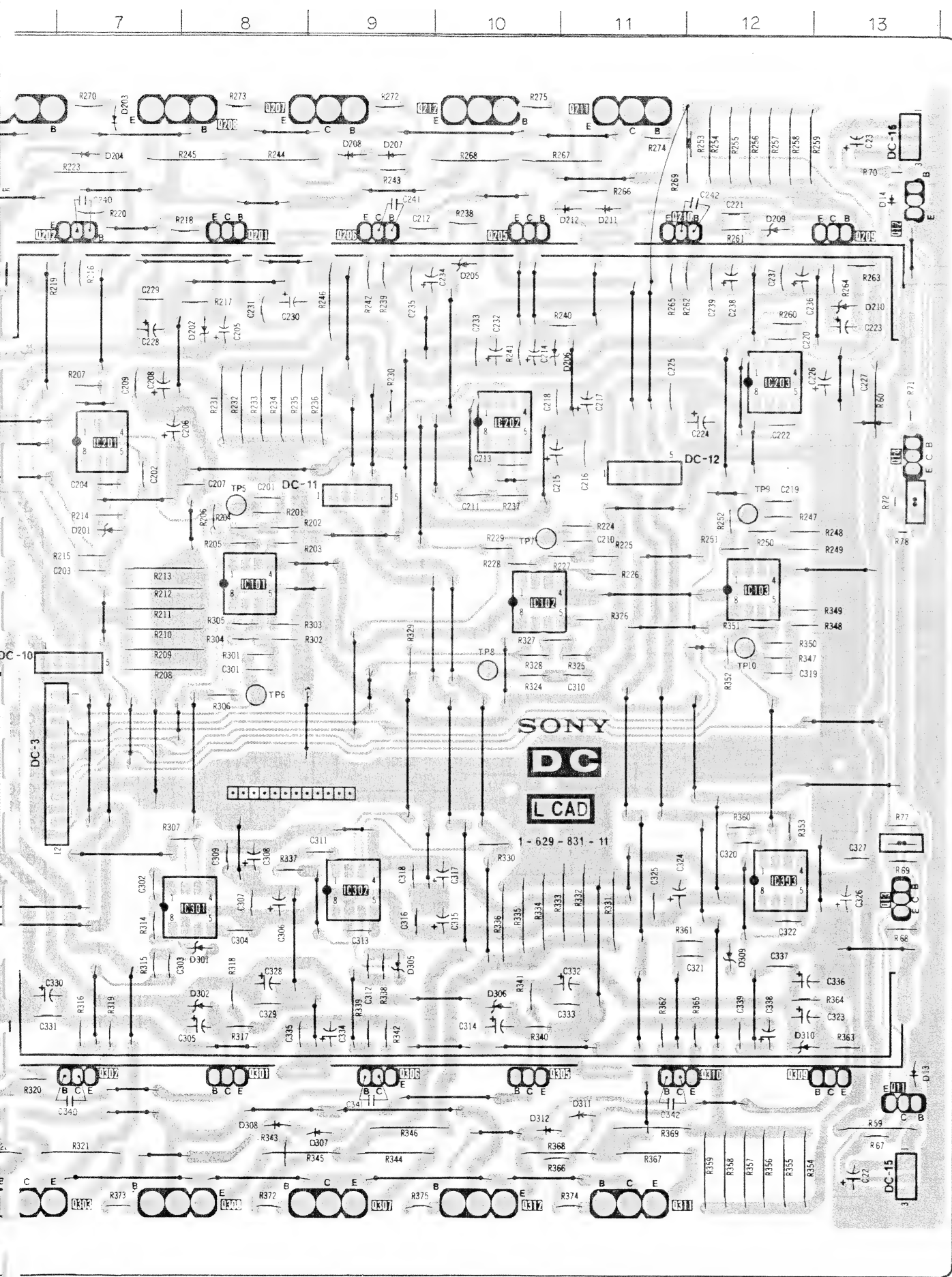




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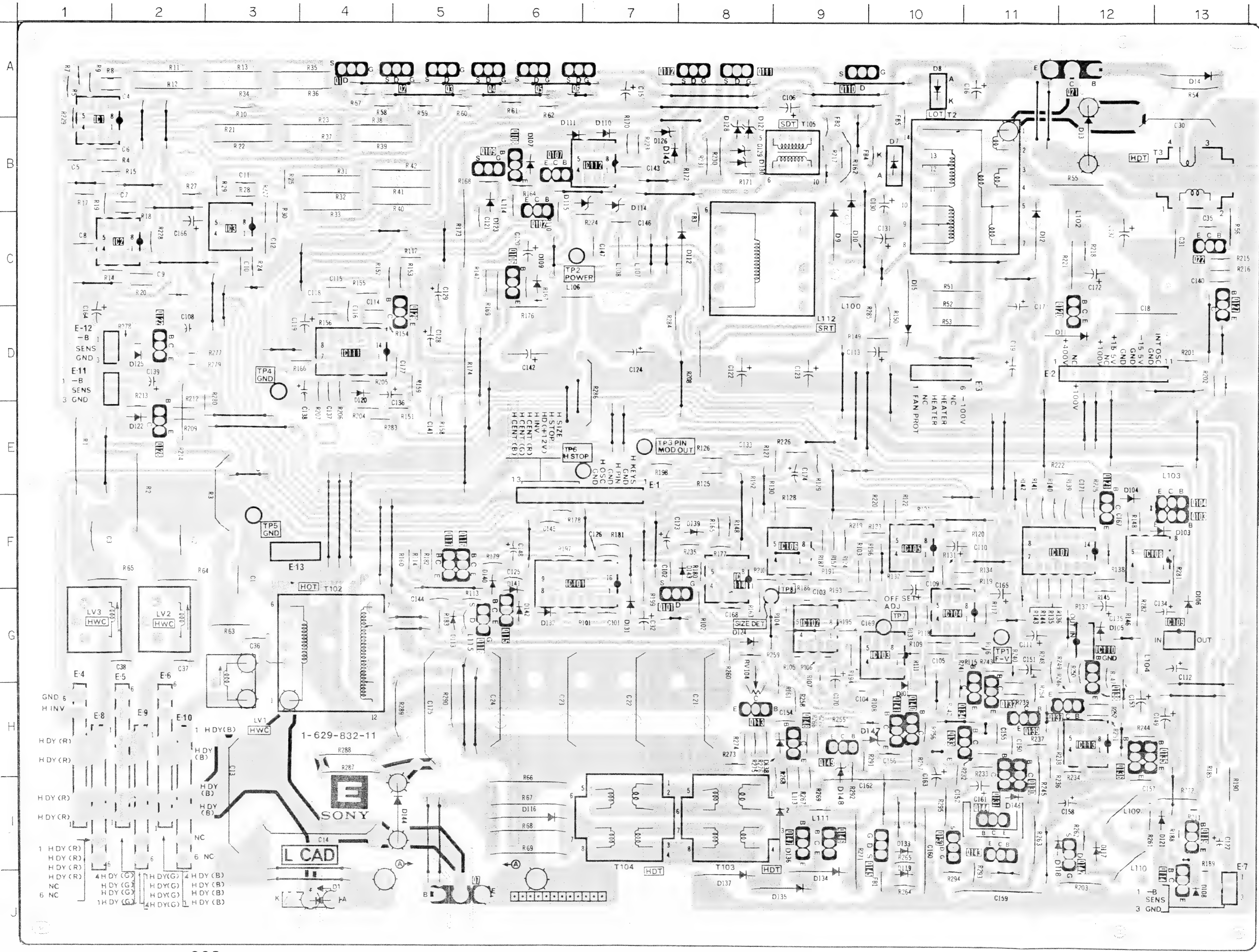


DC BOARD

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IC1	F-5	Q305	I-10
IC2	G-5	Q306	I-9
IC3	I-2	Q307	J-9
IC4	I-4	Q308	J-8
IC5	G-2	Q309	I-13
IC6	G-4	Q310	I-11
IC7	E-2	Q311	J-11
IC8	D-4	Q312	J-10
IC9	D-3	DIODE	
IC101	E-8	D1	F-5
IC102	E-10	D2	G-5
IC103	E-12	D3	I-3
IC201	D-7	D4	I-2
IC202	D-10	D5	F-3
IC203	C-12	D6	G-2
IC301	G-8	D7	D-3
IC302	G-9	D8	F-2
IC303	G-12	D9	D-2
TRANSISTOR		D10	D-3
Q1	I-1	D11	F-1
Q2	G-1	D12	C-2
Q3	F-2	D13	I-13
Q4	C-2	D15	B-2
Q5	D-2	D16	E-2
Q6	D-2	D101	A-2
Q7	H-2	D102	A-3
Q8	F-1	D103	B-3
Q9	B-2	D104	A-3
Q10	G-4	D105	A-4
Q11	I-13	D106	B-4
Q13	G-13	D201	D-7
Q101	B-2	D202	C-8
Q102	A-1	D203	A-7
Q103	A-2	D204	A-7
Q104	A-2	D205	B-10
Q105	A-2	D206	C-10
Q106	B-2	D207	A-9
Q107	B-2	D208	A-9
Q108	A-3	D209	B-13
Q201	B-8	D210	C-13
Q202	B-7	D211	B-11
Q203	A-6	D212	B-11
Q204	A-5	D301	H-8
Q205	B-10	D302	H-8
Q206	B-9	D303	I-6
Q207	A-9	D304	I-6
Q208	A-7	D305	H-9
Q209	B-12	D306	H-10
Q210	B-11	D307	I-9
Q211	A-11	D308	I-8
Q212	A-10	D309	H-12
Q301	I-8	D310	I-12
Q302	I-7	D311	I-11
Q303	J-6	D312	I-10

E [H. OUT]

- E Board -



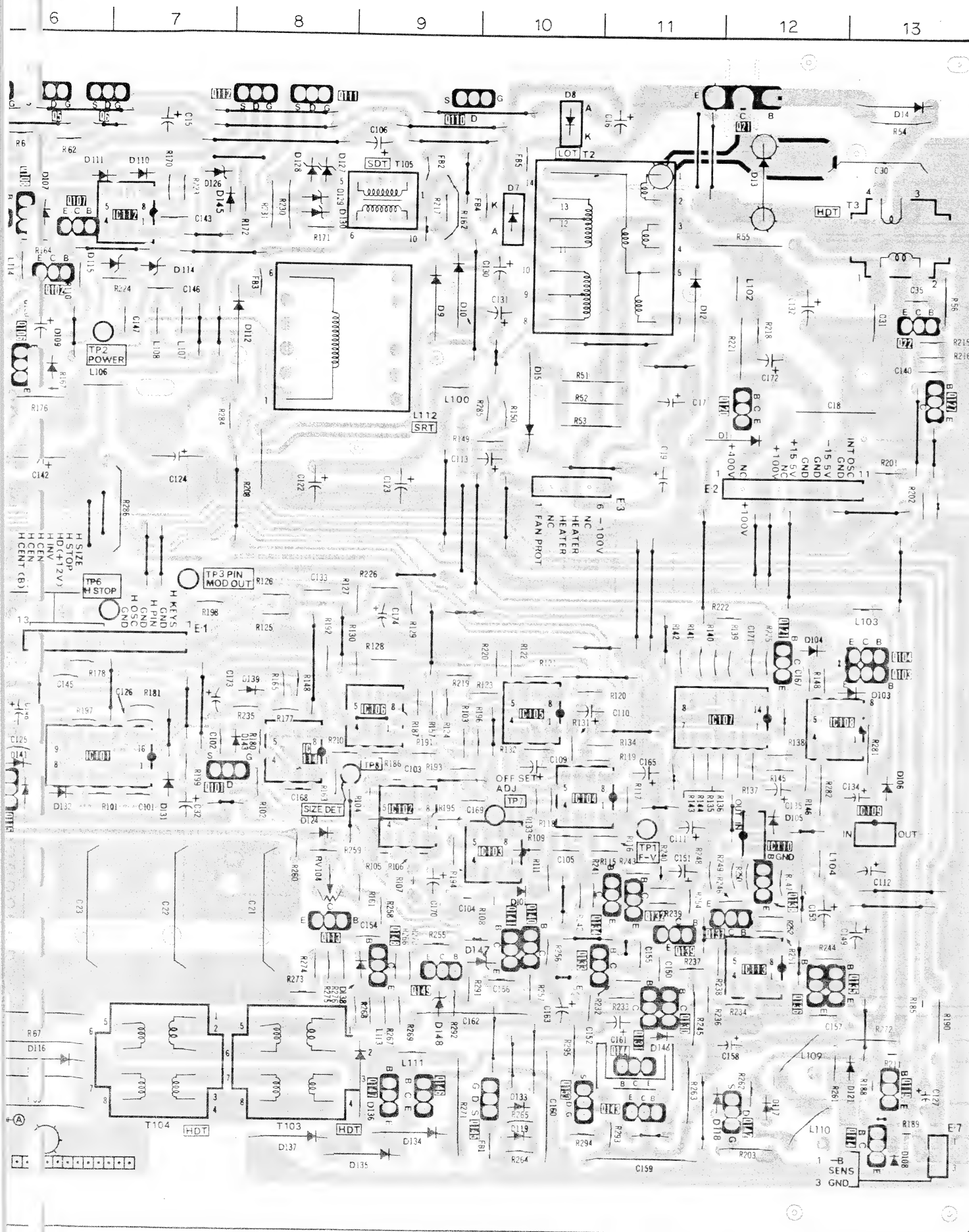
E BC

- IC1
- IC2
- IC3
- IC101
- IC102
- IC103
- IC104
- IC105
- IC106
- IC107
- IC108
- IC109
- IC110
- IC111
- IC112
- IC113
- IC114

TRANS

- Q1
- Q2
- Q3
- Q4
- Q5
- Q6
- Q7
- Q21
- Q22
- Q101
- Q102
- Q103
- Q104
- Q106
- Q107
- Q108
- Q109
- Q110
- Q111
- Q112
- Q113
- Q115
- Q116
- Q117



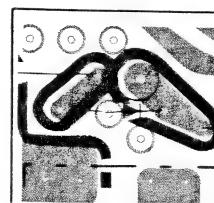
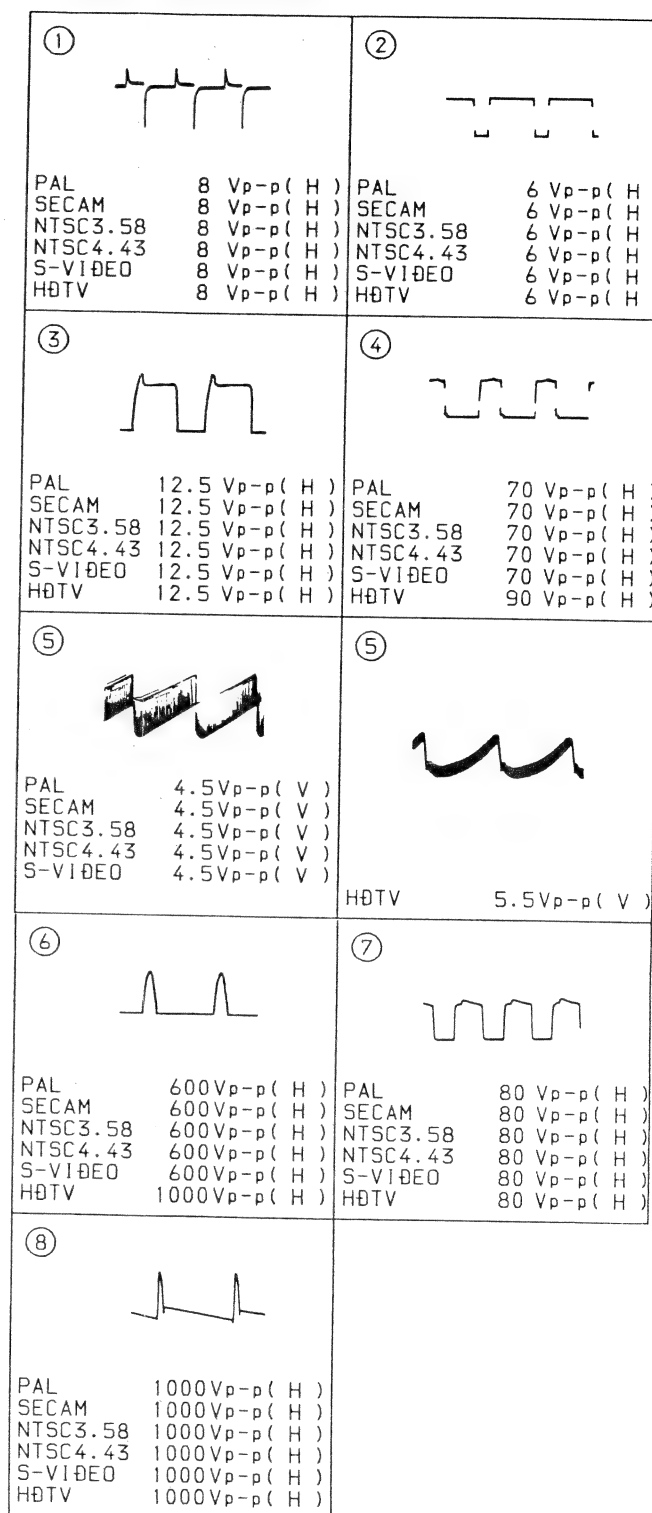


E BOARD

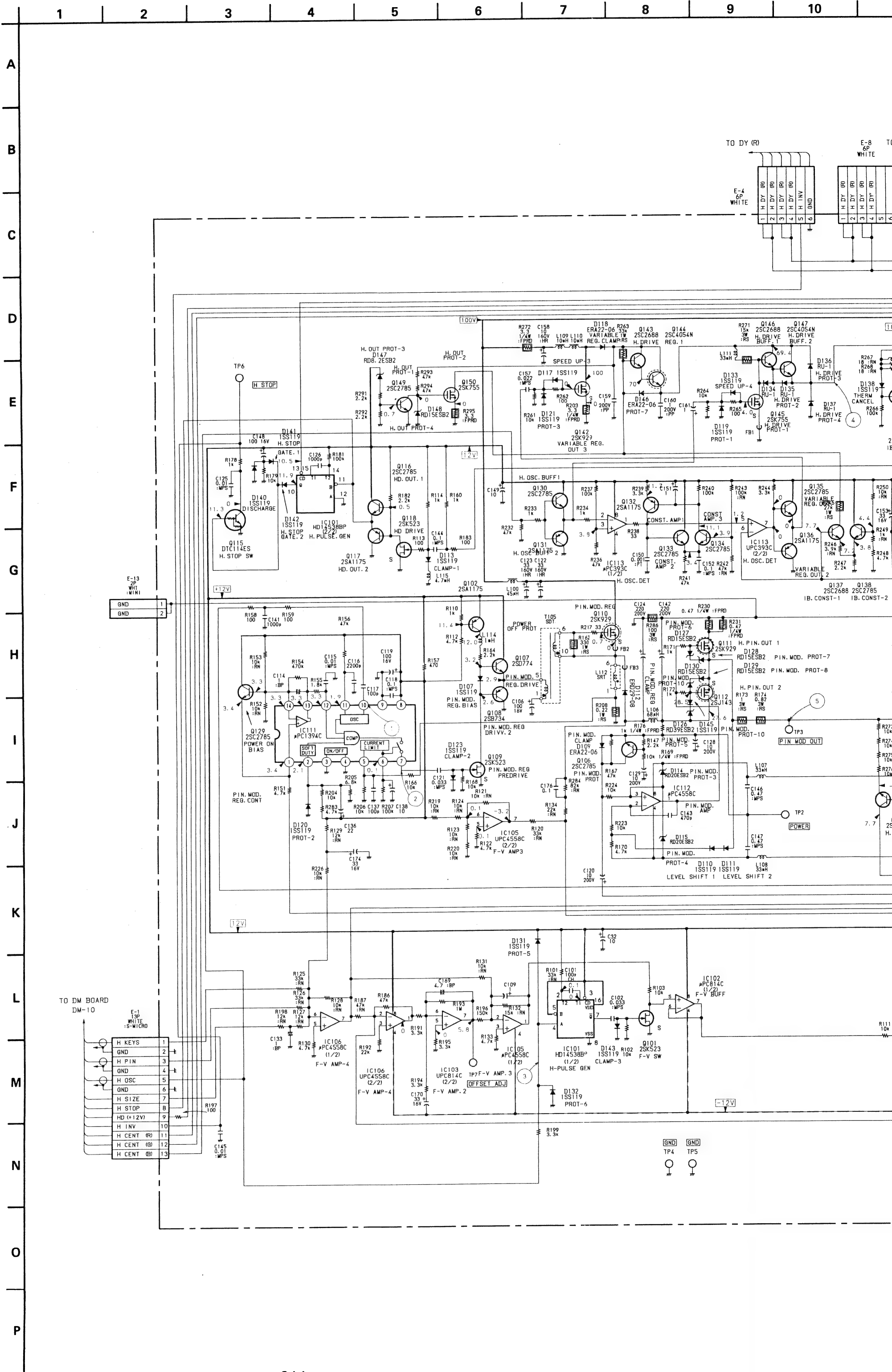
IC	Q118	G-5	D111	B-6
IC1	Q120	D-12	D112	C-8
IC2	Q121	F-12	D113	G-5
IC3	Q127	D-13	D114	B-7
IC101	Q128	E-2	D115	B-7
IC102	Q129	D-5	D116	I-6
IC103	Q130	I-11	D117	I-12
IC104	Q131	I-11	D118	I-12
IC105	Q132	H-11	D119	J-10
IC106	Q133	H-11	D120	D-4
IC107	Q134	H-11	D121	I-13
IC108	Q135	H-12	D122	E-2
IC109	Q136	H-12	D123	B-6
IC110	Q137	H-12	D124	G-8
IC111	Q138	G-12	D126	B-7
IC112	Q139	H-11	D127	B-8
IC113	Q140	H-10	D128	B-8
IC114	Q141	H-10	D129	B-8
	Q142	I-12	D130	B-8
	Q143	I-11	D131	G-7
	Q144	I-11	D132	G-6
	Q145	I-10	D133	I-10
	Q146	I-9	D134	J-9
	Q147	I-9	D135	J-9
	Q148	H-9	D136	I-9
	Q149	H-9	D137	J-8
	Q150	I-10	D138	H-9
			D139	F-8
			D140	G-6
			D141	G-6
			D142	G-6
			D143	F-8
			D144	I-5
			D145	B-7
			D146	I-11
			D147	H-10
			D148	I-9

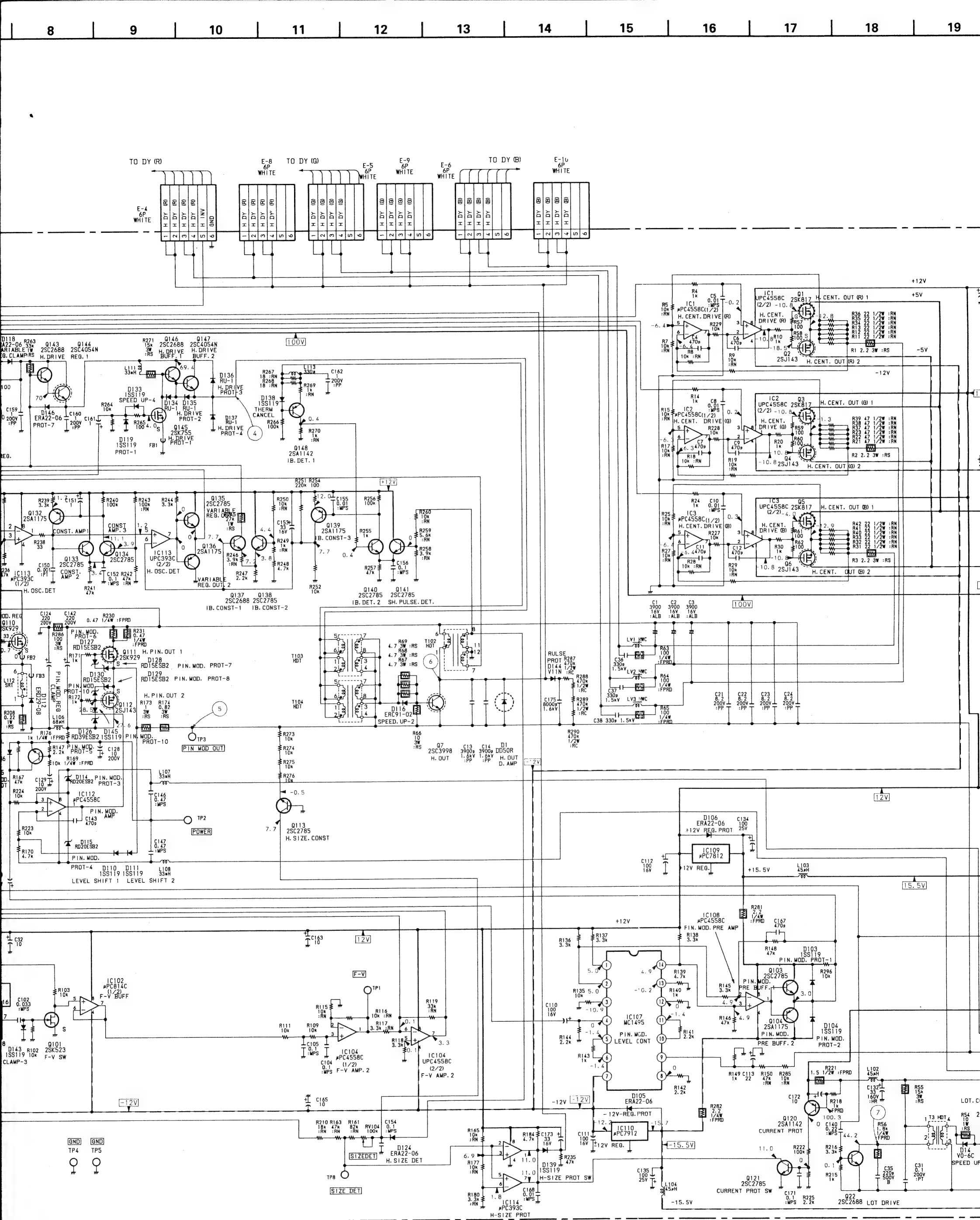
TRANSISTOR	DIODE	VARIABLE RESISTOR
Q1	D1	RV104
Q2	D7	
Q3	D8	
Q4	D9	
Q5	D10	
Q6	D12	
Q7	D13	
Q21	D14	
Q22	D15	
Q101	D103	
Q102	D104	
Q103	D105	
Q104	D106	
Q106	D107	
Q107	D109	
Q108	D110	
Q109		
Q110		
Q111		
Q112		
Q113		
Q115		
Q116		
Q117		

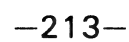
E BOARD WAVEFORMS

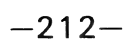


NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.



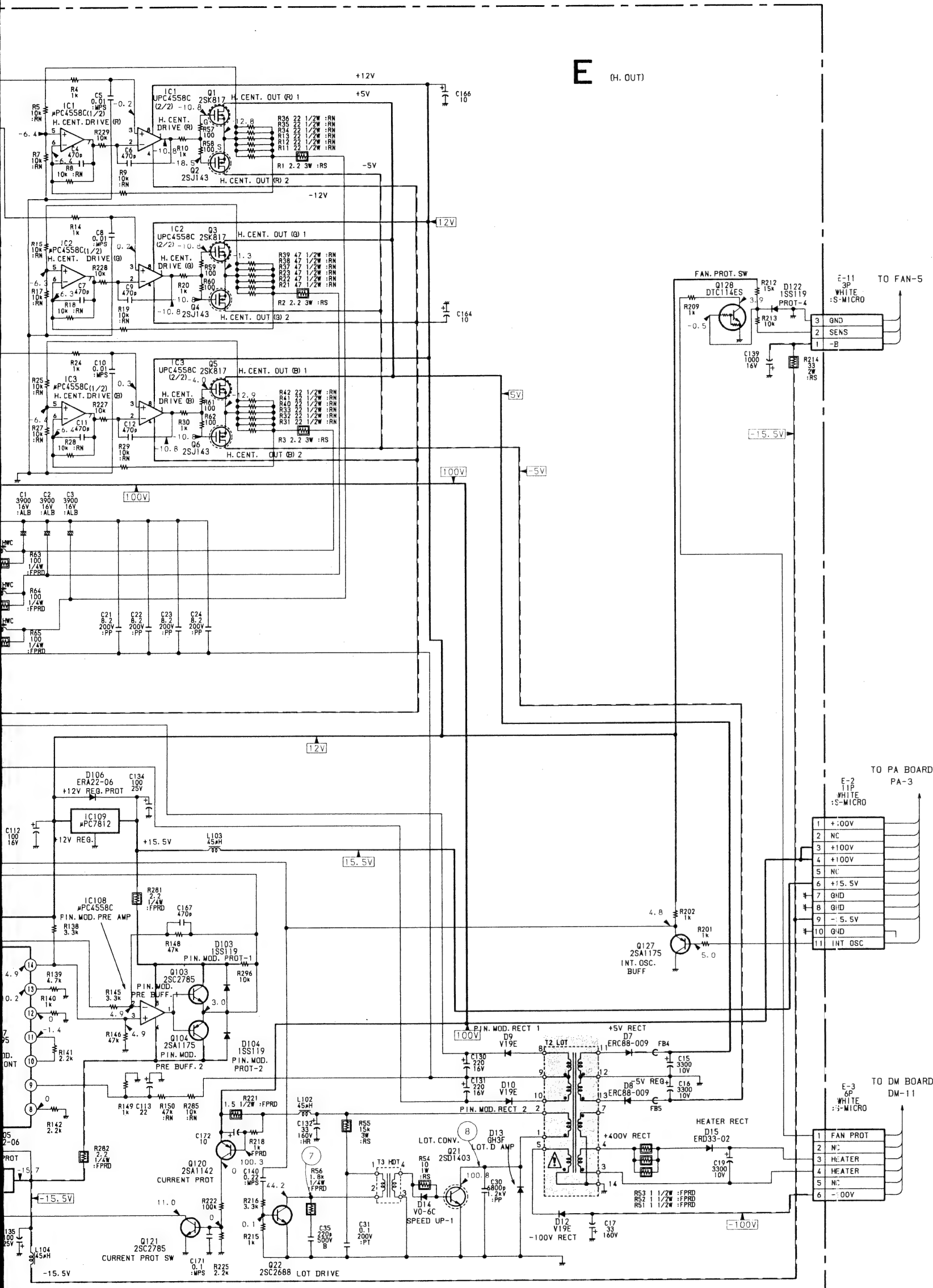






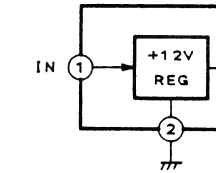
E BOARD

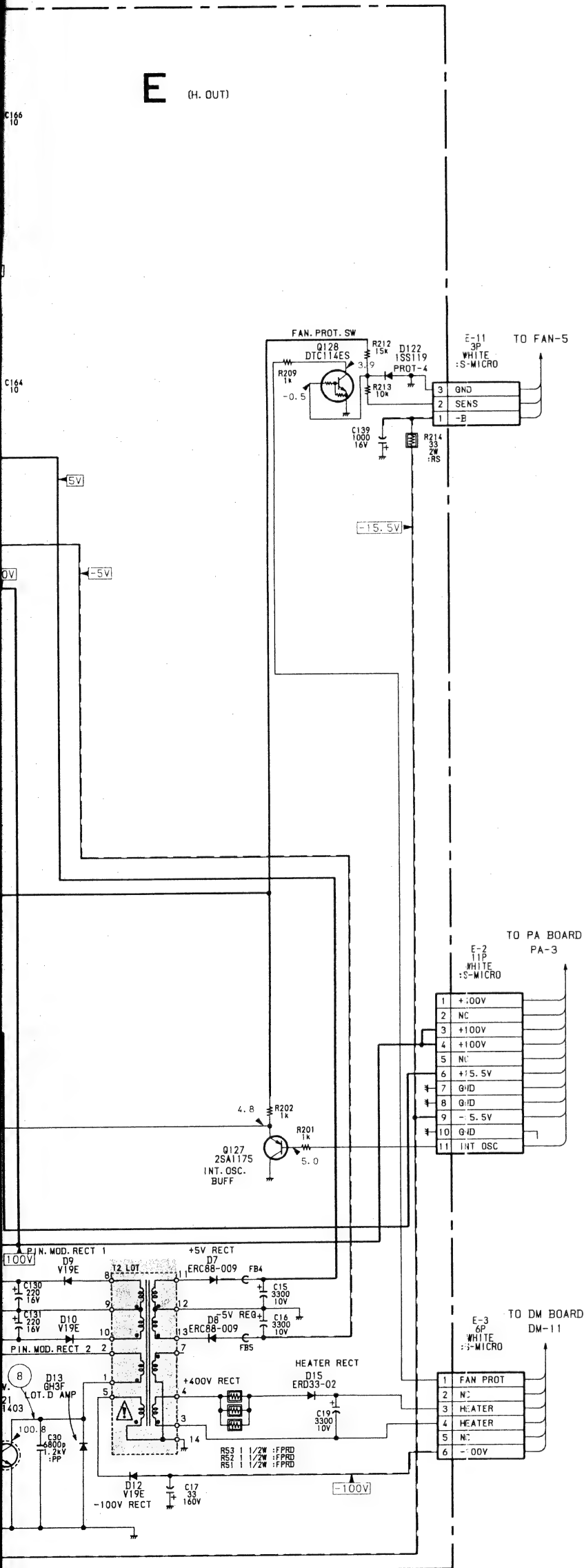
IC	PIN No.	PAL, SECAM, NTSC3.58, NTSC4.43, S
IC1	②	0.6 V
	⑦	0.8
IC2	②	0.8
	⑦	0.8
IC3	②	0.6
	⑦	0.6
IC101	④	5
	⑦	11.1
	⑩	0.8
	⑪	3.1
IC102	⑤	0.4
	⑥	0.4
IC103	⑥	1.4
	①	0.9
IC104	②	0.4
	③	0.4
	④	0.4
	⑤	1.4
IC106	①	0
	②	0
	③	0
	④	0
	⑤	0
	⑥	-3.1
IC107	⑨	-0.4
	⑩	-1.8
IC108	①	2.2
	⑤	0
IC111	⑦	4.4
	⑩	0.2
IC112	①	-28.6
	②	-27.4
	③	-27.4
IC113	②	5.1
	⑤	7.7
IC114	②	2.4
	⑤	2.4



IC1	μ PC4558C
2	μ PC4558C
3	μ PC4558C
101	HD14538P
102	μ PC814C
103	μ PC814C
104	μ PC4558C
105	μ PC4558C
106	μ PC4558C
107	MC1495L
108	μ PC4558C
109	μ PC7812H
110	μ PC7912H
111	μ PC1394C
112	μ PC4558C
113	μ PC393C
114	μ PC393C
Q1	2SK817
2	2SJ143
3	2SK817
4	2SJ143
5	2SK817
6	2SJ143
7	2SC3998
21	2SD1403
22	2SC2688-L
101	2SK523-M1
102	2SA1175
103	2SC2785
104	2SA1175
106	2SC2785
107	2SD774-34
108	2SD774-34
109	2SK523-M1
110	2SK929
111	2SK929
112	2SJ143
113	2SC2785
115	DTC114ES
116	2SC2785
117	2SA1175
118	2SK523-M1
120	2SA1142-P
121	2SC2785
127	2SA1175
128	DTC114ES
129	2SC2785
130	2SC2785
131	2SA1175
132	2SA1175
133	2SC2785
134	2SC2785
135	2SC2785
136	2SA1175
137	2SC2688-L
138	2SC2785
139	2SC1175
140	2SC2785
141	2SC2785
142	2SK929
143	2SC2688-L

E BOARD IC109





E BOARD

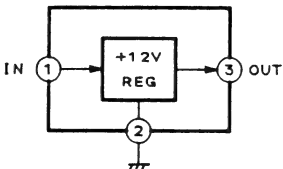
IC	PIN No.	PAL, SECAM, NTSC3.58, NTSC4.43, S-VIDEO	HDTV
IC1	②	0.6 V	0.4 V
	⑦	0.6	0.4
IC2	②	0.8	0.5
	⑦	0.8	0.5
IC3	②	0.6	0.4
	⑦	0.6	0.4
	④	5	5.7
IC101	⑦	11.1	10.1
	⑪	0.8	1.2
	⑭	3.1	1.6
IC102	⑤	0.4	0.8
	⑥	0.4	0.9
IC103	⑥	1.4	0
	①	0.9	1.9
IC104	②	0.4	0.9
	③	0.4	0.9
	①	1.4	11
	②	0	4.1
	③	0	6.9
	⑤	0	4.1
	⑥	0	1.7
	⑦	-3.1	11
IC107	⑨	-0.4	-0.9
IC108	⑩	-1.8	-2.4
	①	2.2	2.4
	⑤	0	*
IC111	⑦	4.4	3.8
	⑩	0.2	0
IC112	①	-28.6	-58.8
	②	-27.4	-57.6
	③	-27.4	-57.5
IC113	②	5.1	5.7
	⑥	7.7	5.4
	②	2.4	4.1
IC114	⑤	2.4	4.1

E BOARD

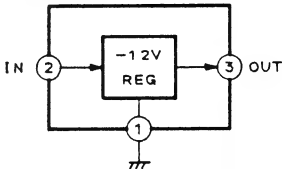
Q No.	PAL, SECAM, NTSC3.58, NTSC4.43, S-VIDEO	HDT
Q7	B	-25.5 V
	E	-25
	C	-13.7
Q21	B	*
Q101	G	-0.4
Q103	B	2.2
Q104	B	2.2
	B	-27.8
Q106	C	-27.4
	G	-0.8
Q109	S	2.7
	G	-28.5
Q111	D	-13.8
Q112	D	-26.1
	B	0.4
Q116	E	0.8
	B	0.4
Q117	E	0.8
	G	0.6
Q118	D	0.4
	B	5
Q130	E	5.1
	B	5
Q131	E	5.1
	B	11.1
Q132	C	1.2
Q133	B	1.2
Q137	C	46.9
Q139	B	11.4
Q140	E	1.1
Q141	E	1.1
Q143	B	70.5
Q144	E	69.4
Q145	G	3.9
	B	39.8
Q146	E	39.8
	B	39.8
Q147	E	39.8
	B	39.4
Q148	E	39.1
Q150	D	70.5

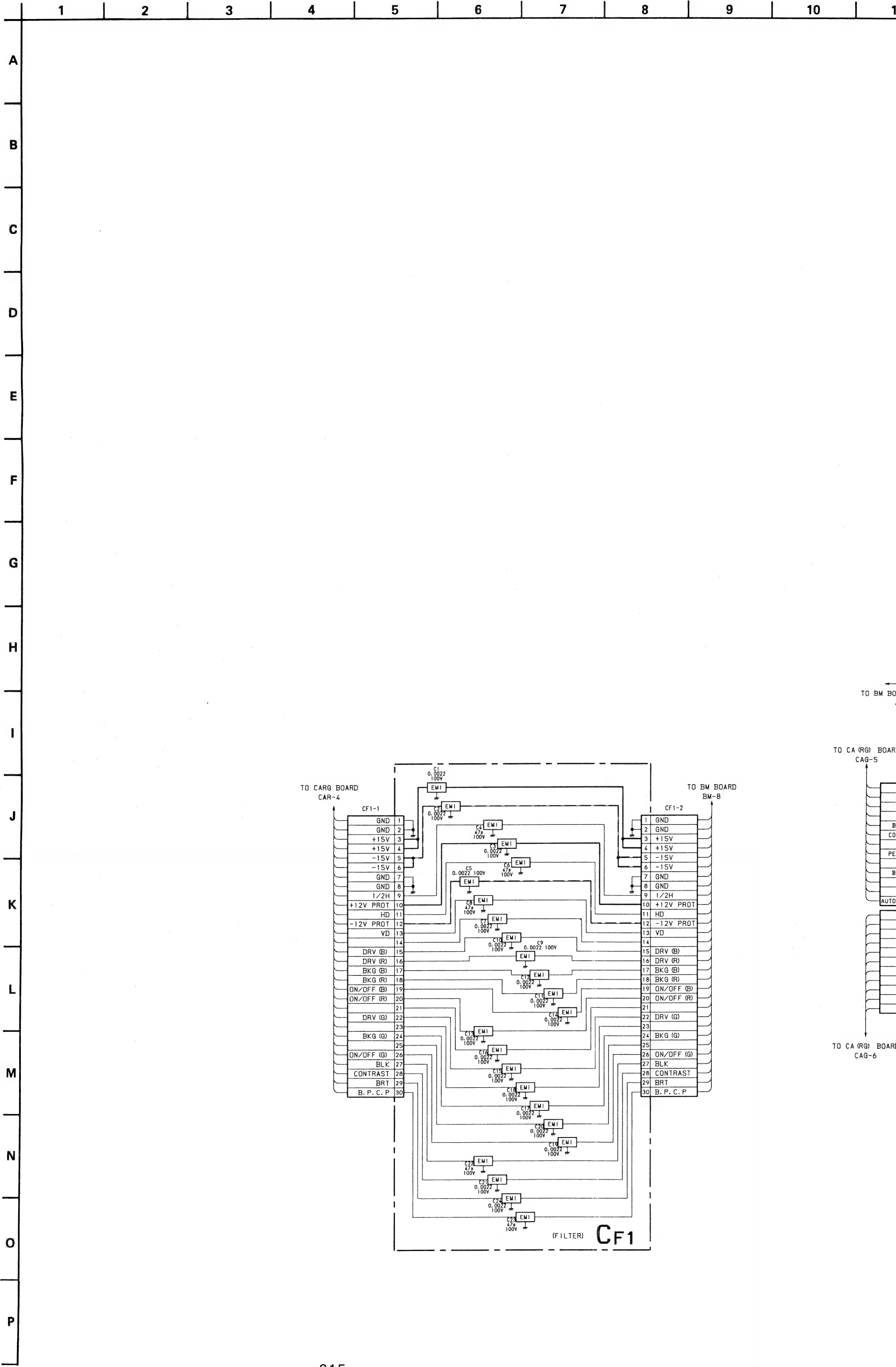
IC1	μ PC4558C	H.CENT DRIVE (R)	144	2SC4054N	H.DRIVE REG-2
2	μ PC4558C	H.CENT DRIVE (G)	145	2SK755	H.DRIVE
3	μ PC4558C	H.CENT DRIVE (B)	146	2SC2688-L	H.DRIVE BUFF-1
101	HD14538P	H.PULSE GEN	147	2SC4054N	H.DRIVE BUFF-2
102	μ PC814C	F-V BUFF	148	2SA1142-P	IB DET-1
103	μ PC814C	F-V AMP-1	149	2SC2785	H.OUT PROT-1
104	μ PC4558C	F-V AMP-2	150	2SK755	H.OUT PROT-2
105	μ PC4558C	F-V AMP-3			
106	μ PC4558C	F-V AMP-4	D1	DD50R	H.OUT DAMP
107	MC1495L	MOD LEVEL CONT	7	ERC88-009	+5V RECT
108	μ PC4558C	PIN MOD PRE AMP	8	ERC88-009	-5V RECT
109	μ PC7812H	+12V REG	9	V19E	PIN MOD RECT-1
110	μ PC7912H	-12V REG	10	V19E	PIN MOD RECT-2
111	μ PC1394C	PIN MOD REG CONT	11	V11N	+400V RECT
112	μ PC4558C	PIN MOD AMP	12	V19E	-100V RECT
113	μ PC393C	H.OSC DET	13	GH-3F	LOT DAMP
114	μ PC393C	H.SIZE PROT	14	V06C	SPEED UP-1
			15	ERD33-02	HEATER RECT
Q1	2SK817	H.CENT OUT (R)-1	103	1SS119	PIN MOD PROT-1
2	2SJ143	H.CENT OUT (R)-2	104	1SS119	PIN MOD PROT-2
3	2SK817	H.CENT OUT (G)-1	105	ERA22-06	-12V REG PROT
4	2SJ143	H.CENT OUT (G)-2	106	ERA22-06	+12V REG PROT
5	2SK817	H.CENT OUT (B)-1	107	1SS119	PIN MOD REG BIAS
6	2SJ143	H.CENT OUT (B)-2	108	ERA22-06	PIN MOD CLAMP
7	2SC3998	H.OUT	110	1SS119	LEVEL SHIFT-1
21	2SD1403	LOT CONV	111	1SS119	LEVEL SHIFT-2
22	2SC2688-L	LOT DRIVE	112	ERD29-08J	PIN MOD REG CLAMP
101	2SK523-M1	F-V SW	113	1SS119	CLAMP-1
102	2SA1175	POWER OFF PORT	114	RD20ESB2	PIN MOD PROT-3
103	2SC2785	PIN MOD PRE BUFF-1	115	RD20ESB2	PIN MOD PROT-4
104	2SA1175	PIN MOD PRE BUFF-2	116	ERC91-02	SPEED UP-2
106	2SC2785	PIN MOD PROT	117	1SS119	SPEED UP-3
107	2SD774-34	PIN MOD REG DRIVE-1	118	ERA22-06	VARIABLE REG CLAMP
108	2SD774-34	PIN MOD REG DRIVE-2	119	1SS119	PROT-1
109	2SK523-M1	PIN MOD REG PRE DRIVE	120	1SS119	PROT-2
110	2SK929	PIN MOD REG	121	1SS119	PROT-3
111	2SK929	H.PIN OUT-1	122	1SS119	PROT-4
112	2SJ143	H.PIN OUT-2	123	1SS119	CLAMP-2
113	2SC2785	H.SIZE CONST	124	ERA22-06	H.SIZE DET
115	DTC114ES	H.STOP SW	126	RD39ESB2	PIN MOD DET
116	2SC2785	HD OUT-1	127	RD15ESB2	PIN MOD PROT-6
117	2SA1175	HD OUT-2	128	RD15ESB2	PIN MOD PROT-7
118	2SK523-M1	HD DRIVE	129	RD15ESB2	PIN MOD PROT-8
120	2SA1142-P	CURRENT PROT	130	RD15ESB2	PIN MOD PROT-9
121	2SC2785	CURRENT PROT SW	131	1SS119	PROT-5
127	2SA1175	INT OSC BUFF	132	1SS119	PROT-6
128	DTC114ES	FAN PORT SW	133	1SS119	SPEED UP-4
129	2SC2785	POWER ON BIAS	134	RU-1	H.DRIVE PROT 1
130	2SC2785	H.OSC BUFF-1	135	RU-1	H.DRIVE PROT 2
131	2SA1175	H.OSC BUFF-2	136	RU-1	H.DRIVE PROT 3
132	2SA1175	CONST AMP-1	137	RU-1	H.DRIVE PROT 4
133	2SC2785	CONST AMP-2	138	1SS119	THERM CANCEL
134	2SC2785	CONST AMP-3	139	1SS119	H.SIZE PROT SW
135	2SC2785	VARIABLE REG OUT-1	140	1SS119	DIS CHARGE
136	2SA1175	VARIABLE REG OUT-2	141	1SS119	H.STOP GATE-1
137	2SC2688-L	IB CONST-1	142	1SS119	H.STOP GATE-2
138	2SC2785	IB CONST-2	143	1SS119	CLAMP-3
139	2SC1175	IB CONST-3	144	V11N-52	PULSE PROT
140	2SC2785	IB DET-2	145	1SS119	PIN MOD PROT-10
141	2SC2785	PULSE DET	146	ERA22-06	PROT-7
142	2SK929	VARIABLE REG OUT-3	147	RD8.2ESB2	H.OUT PROT-3
143	2SC2688-L	H.DRIVE REG-1	148	RD15ESB2	H.OUT PROT-4

E BOARD IC109 μPC7812

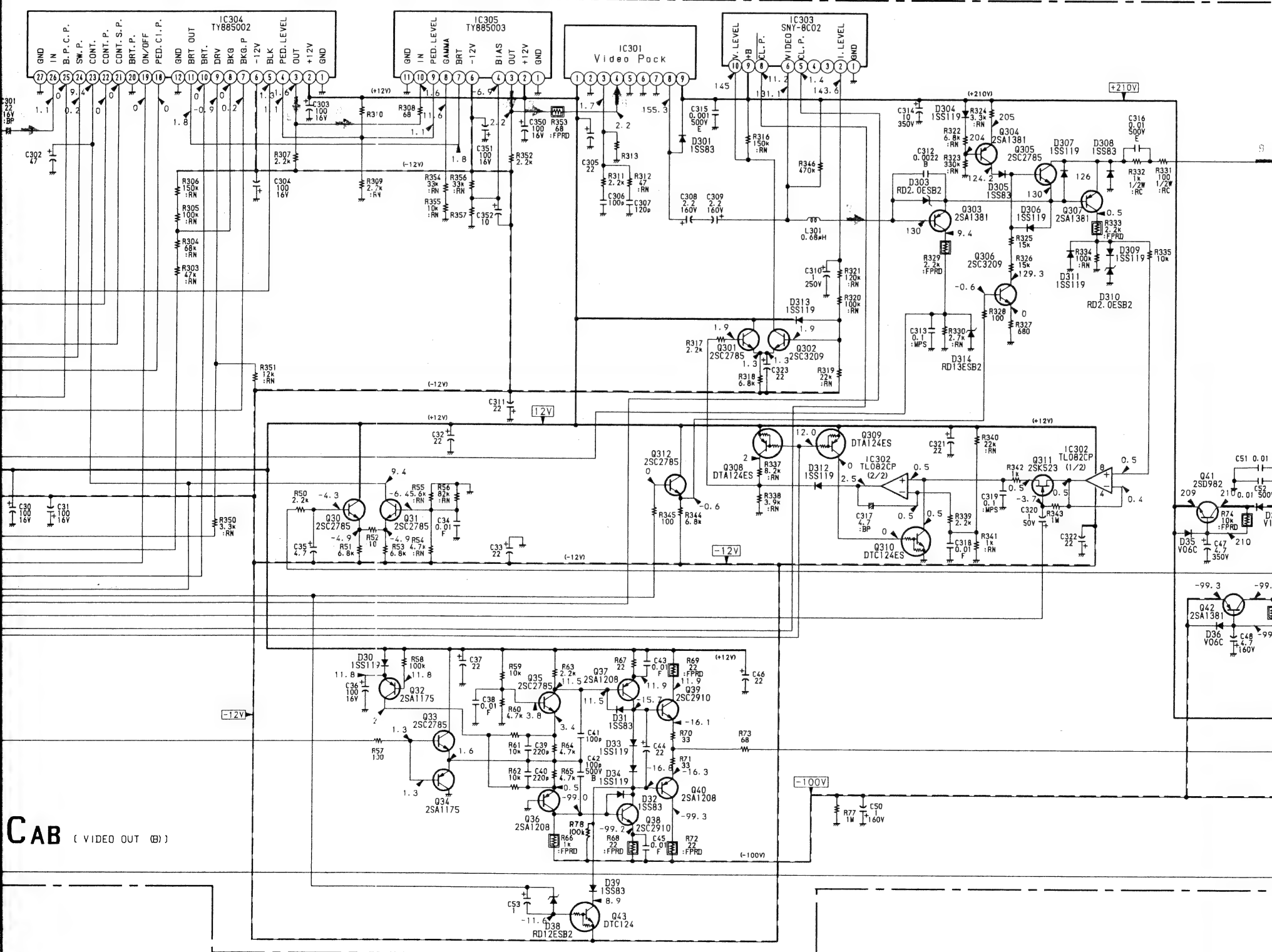


E BOARD IC110 μPC7912

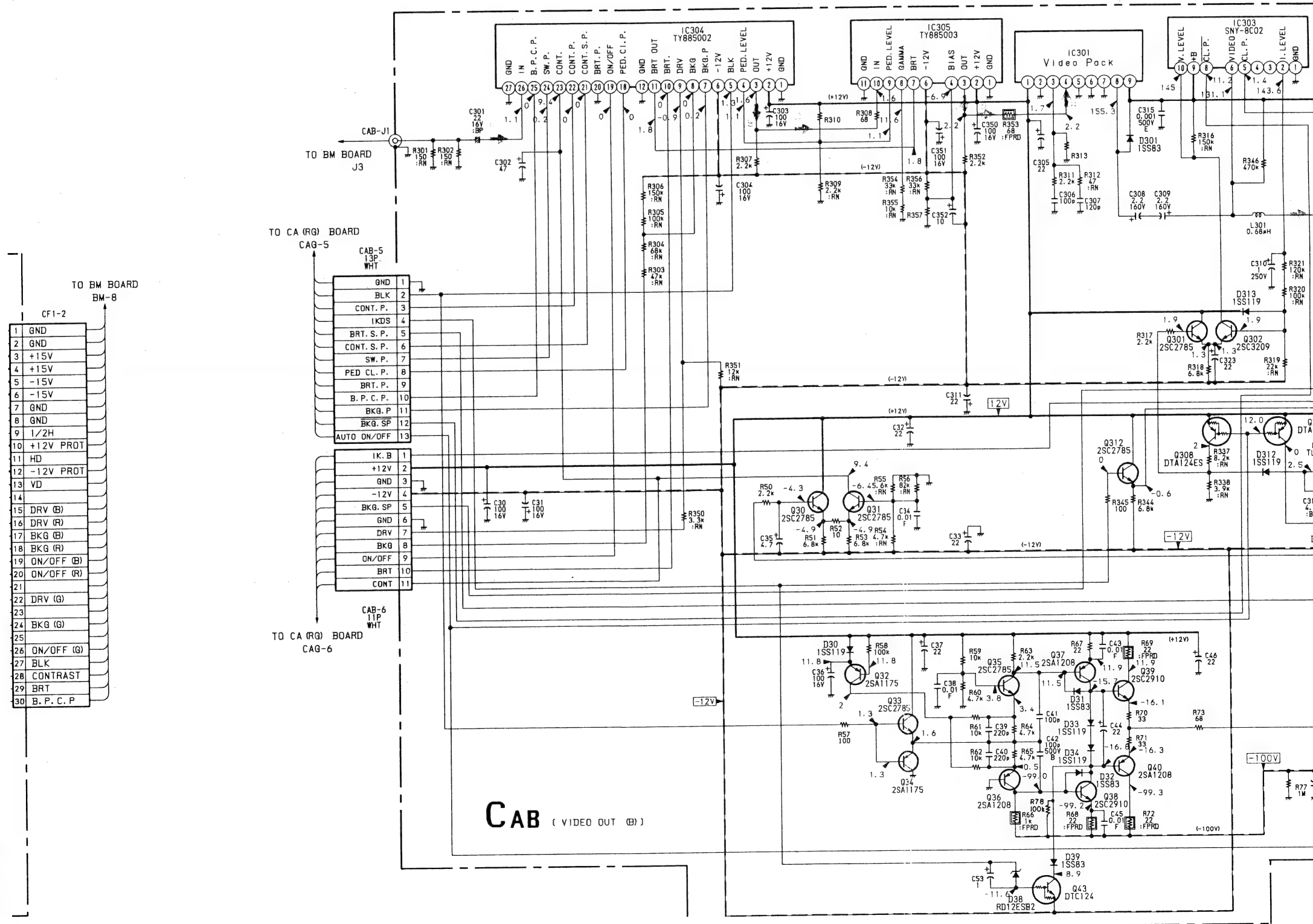






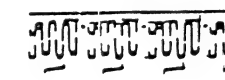



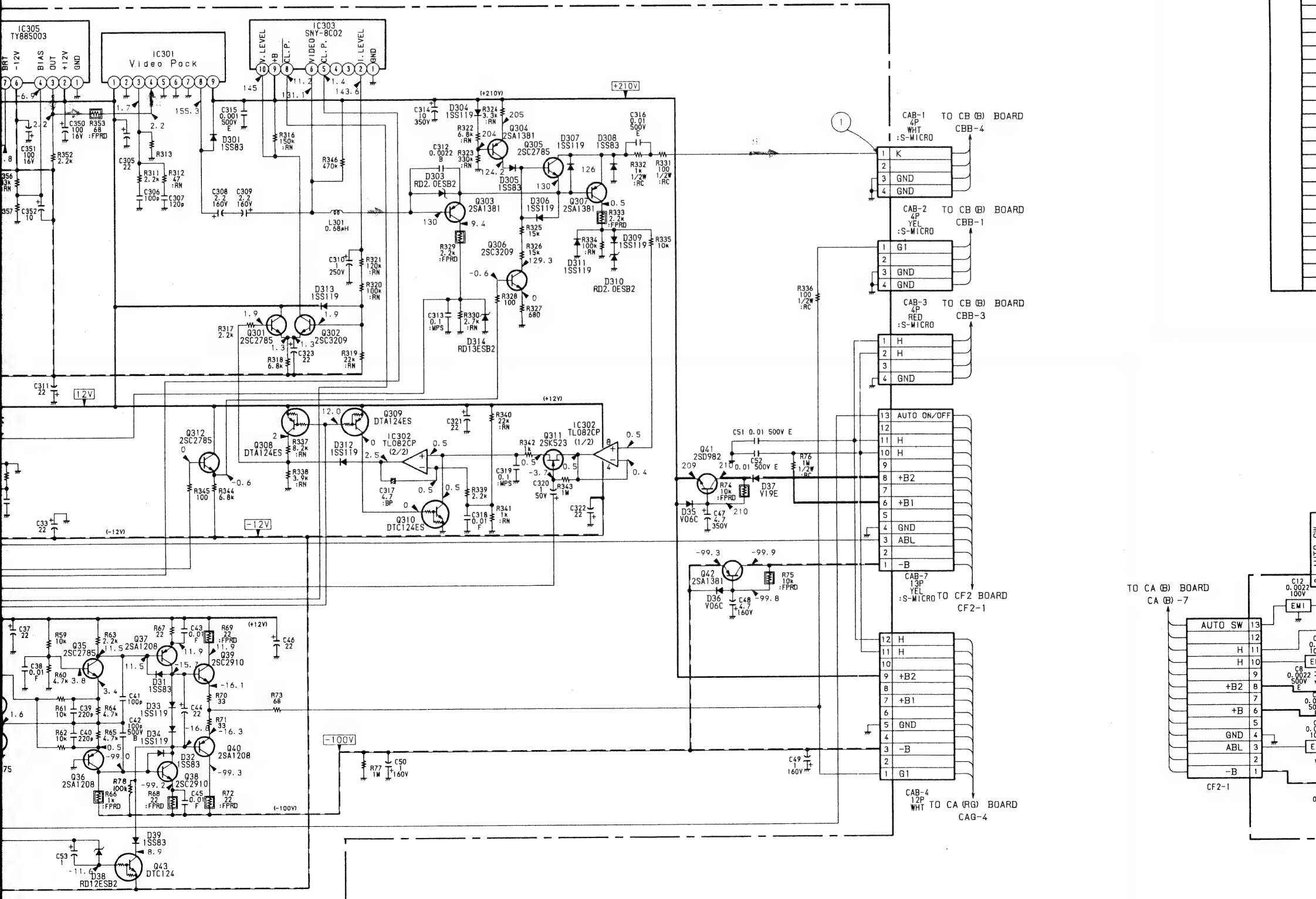


CAB (VIDEO OUT (B))

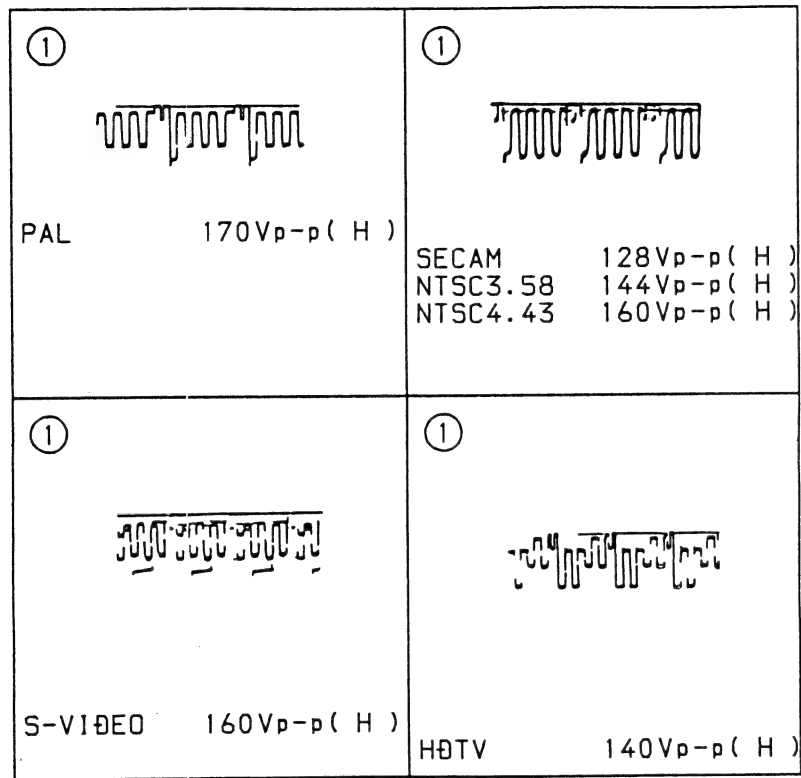


CA(B) BOARD WAVEFORMS

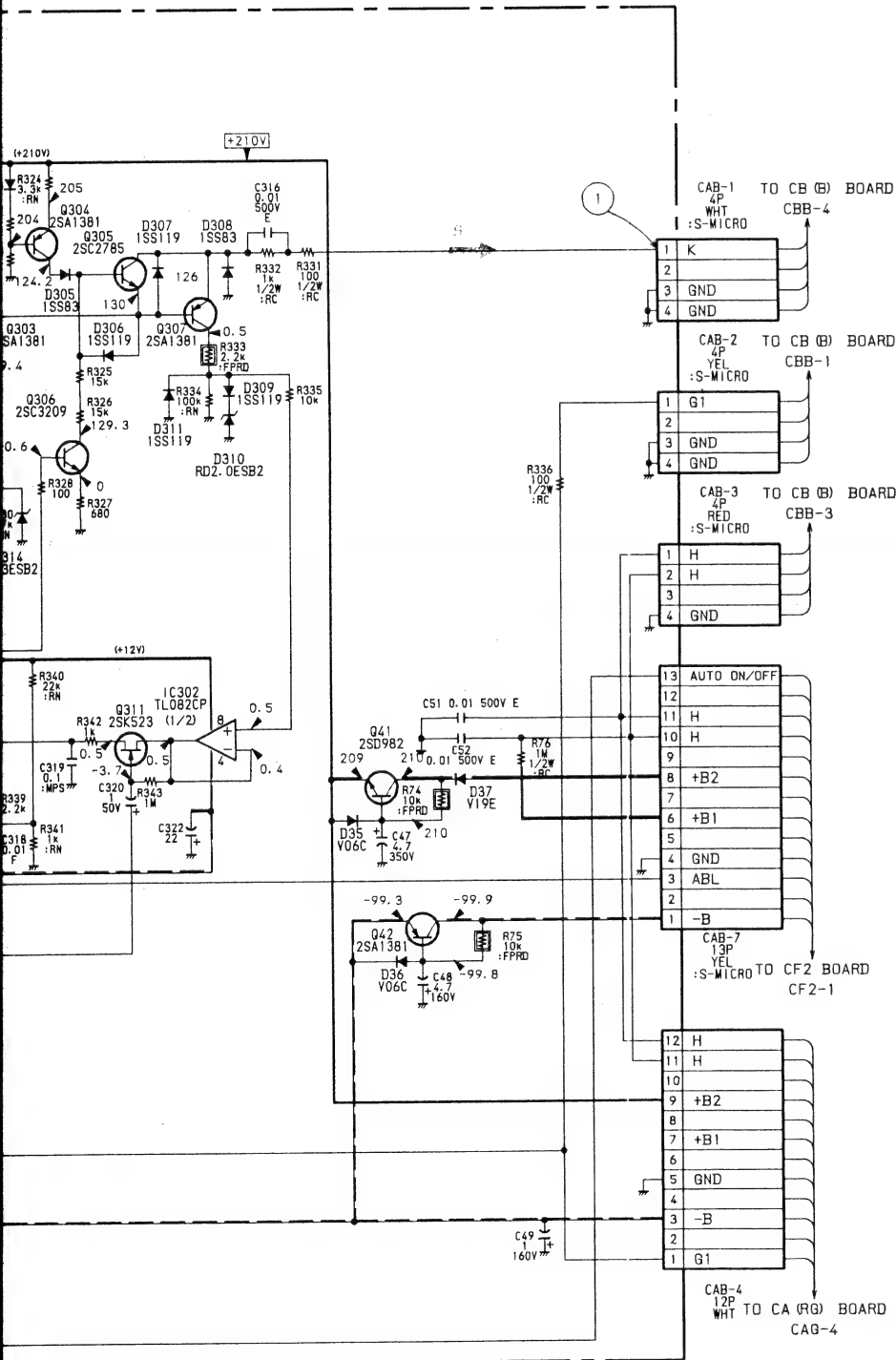
①		①	
PAL	170Vp-p (H)	SECAM	128Vp-p (H)
		NTSC3.58	144Vp-p (H)
		NTSC4.43	160Vp-p (H)
①		①	
S-VIDEO	160Vp-p (H)	HDTV	140Vp-p (H)



CA(B) BOARD WAVEFORMS



IC301	VPH05	B VIDEO OUT
302	TL082CP	B AUTO BKG
303	SNY-8C02	B CLAMP
304	TY885002	B SIGNAL PROCESS
305	TY885003	B γ CORR.
Q30	2SC2785	Σ ABL
31	2SC2785	Σ ABL
32	2SA1175	OFF SPOT PROT
33	2SC2785	BLK
34	2SA1175	BLK
35	2SC2785	BLK
36	2SA1208	BLK
37	2SA1208	BLK
38	2SC2910	BLK
39	2SC2910	BLK
40	2SA1208	BLK
41	2SD982	+210V RIPPLE FILTER
42	2SA1381	-100V RIPPLE FILTER
43	DTC124ES	BRT PULSE GEN
301	2SC2785	B CLAMP
302	2SC2785	B CLAMP
303	2SA1381	B IK DET-1
304	2SA1381	B CURRENT SOURCE
305	2SC2785	B IK DET-2
306	2SC2785	B IK DET-2
307	2SA1381	B IK DET-2
308	DTA124ES	B AUTO BKG SW
309	DTA124ES	B AUTO BKG SW
310	DTC124ES	B AUTO BKG SW
311	2SK523	B AUTO BKG
312	2SC2785	B IK DET-2
D30	1SS119	OFF SPOT PROT
31	1SS83	BLK
32	1SS83	BLK
33	1SS119	BLK
34	1SS119	BLK
35	V06C	+12V RIPPLE FILTER PROT
36	V06C	-100V RIPPLE FILTER PROT
37	V19E	+210V RIPPLE FILTER PROT
38	RD12ESB2	BRT PULSE GEN
39	1SS83	BRT PULSE GEN
301	1SS83	B VIDEO OUT PROT
303	RD2.0ESB2	B IK DET-1 PROT
304	1SS119	B THERM COMP
305	1SS83	B IK DET-2 PROT
306	1SS119	B IK DET-2 PROT
307	1SS119	B IK DET-2 PROT
308	1SS83	B VIDEO OUT PROT
309	1SS119	B IK DET-2 PROT
310	RD2.0ESB2	B IK DET-2 PROT
311	1SS119	B IK DET-2 PROT
312	1SS119	B AUTO BKG SW
313	1SS119	B OFF SPOT PROT
314	RD13ESB2	B IK DET-2 PROT
315	RD3.3ESB2	B DRV

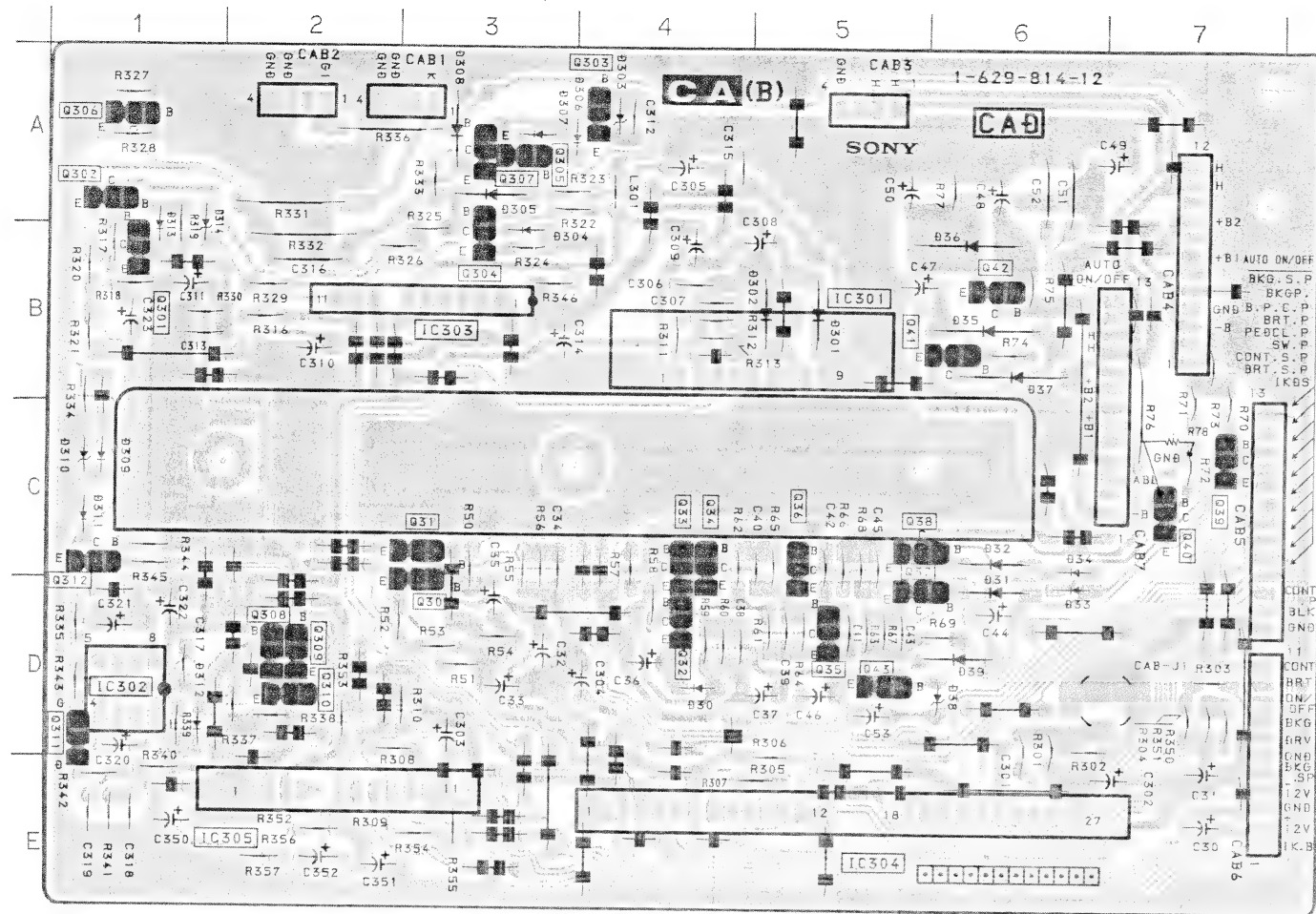


CA(B) [VIDEO OUT(B)]

CF-1 [FILTER]

CF-2 [FILTER]

— CA(B) board —



CA (B) BOARD

– CF1 Board –

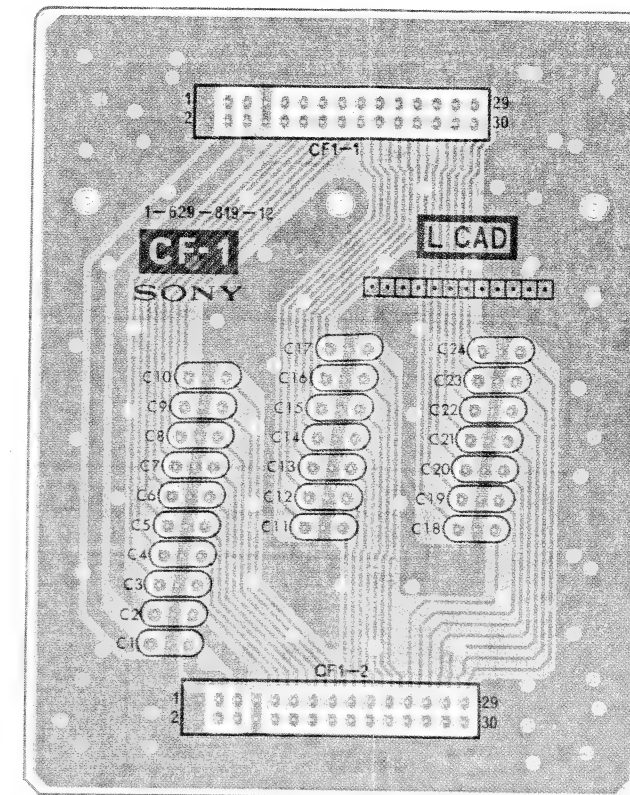
IC	
IC301	B - 5
IC302	D - 1
IC303	B - 3
IC304	E - 5
IC305	E - 2

TRANSISTOR

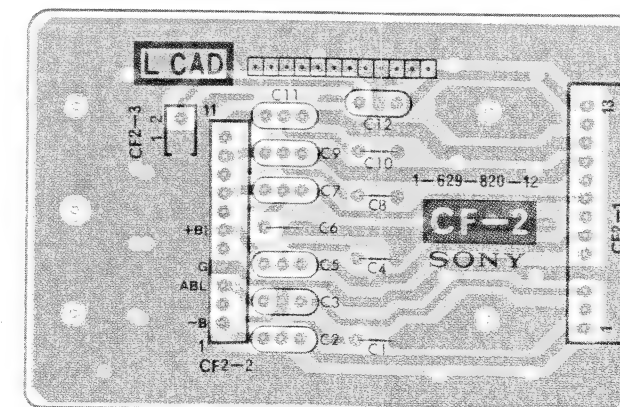
Q30	D-3
Q31	C-3
Q32	D-4
Q33	C-4
Q34	C-4
Q35	D-5
Q36	C-5
Q37	D-5
Q38	C-5
Q39	C-7
Q40	C-7
Q41	B-6
Q42	B-6
Q43	D-5
Q301	B-1
Q302	A-1
Q303	A-4
Q304	B-3
Q305	A-3
Q306	A-1
Q307	A-3
Q308	D-2
Q309	D-2
Q310	D-2
Q311	D-1
Q312	C-1

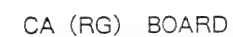
DIODE

D30	D-4
D31	D-6
D32	C-6
D33	D-6
D34	C-6
D35	B-6
D36	B-6
D37	B-6
D38	D-6
D39	D-6
D301	B-5
D303	A-4
D304	B-3
D305	A-3
D306	A-3
D307	A-3
D308	A-3
D309	C-1
D310	C-1
D311	C-1
D312	D-1
D313	B-1
D314	B-1

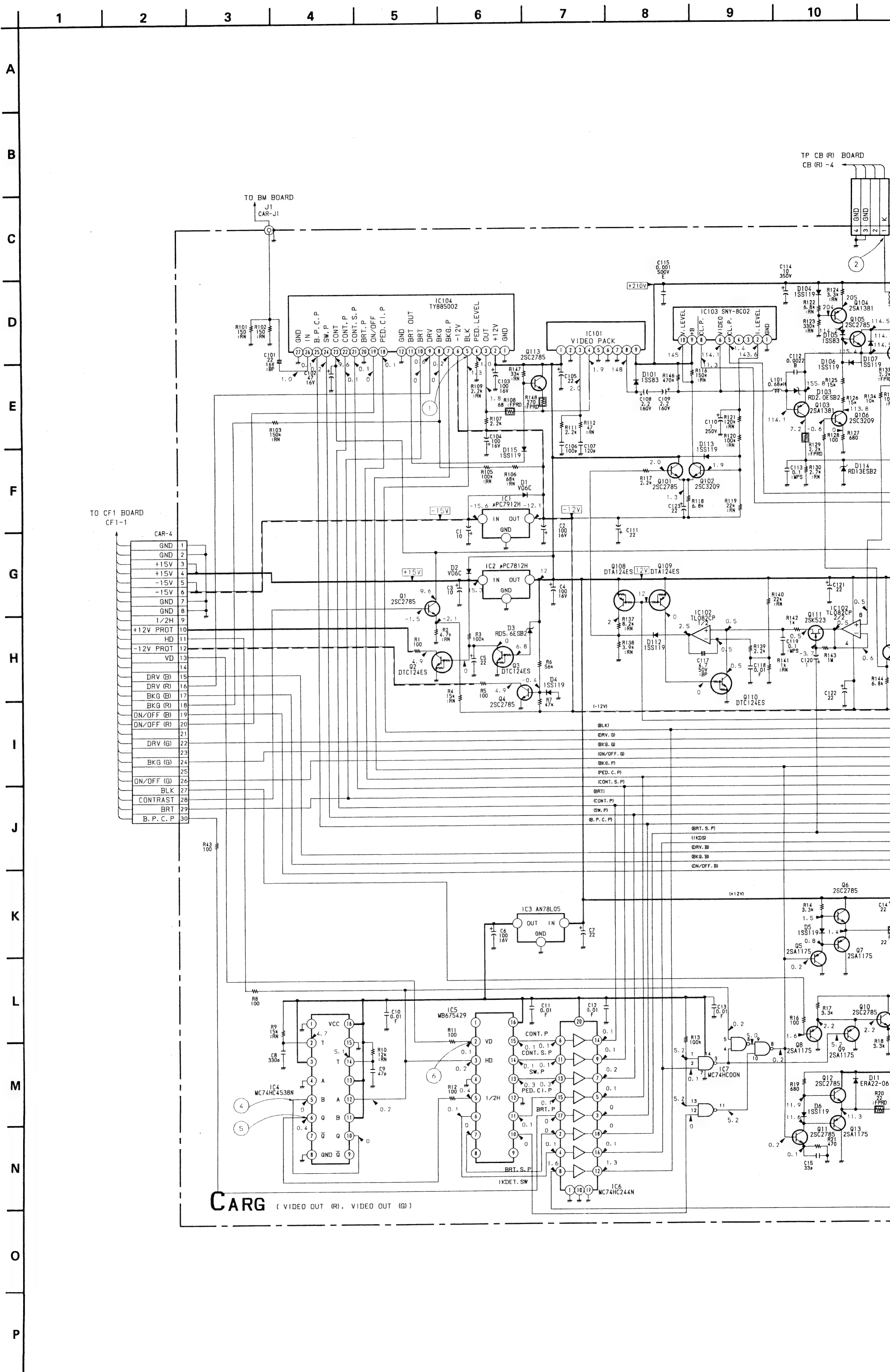


— CF2 Board —

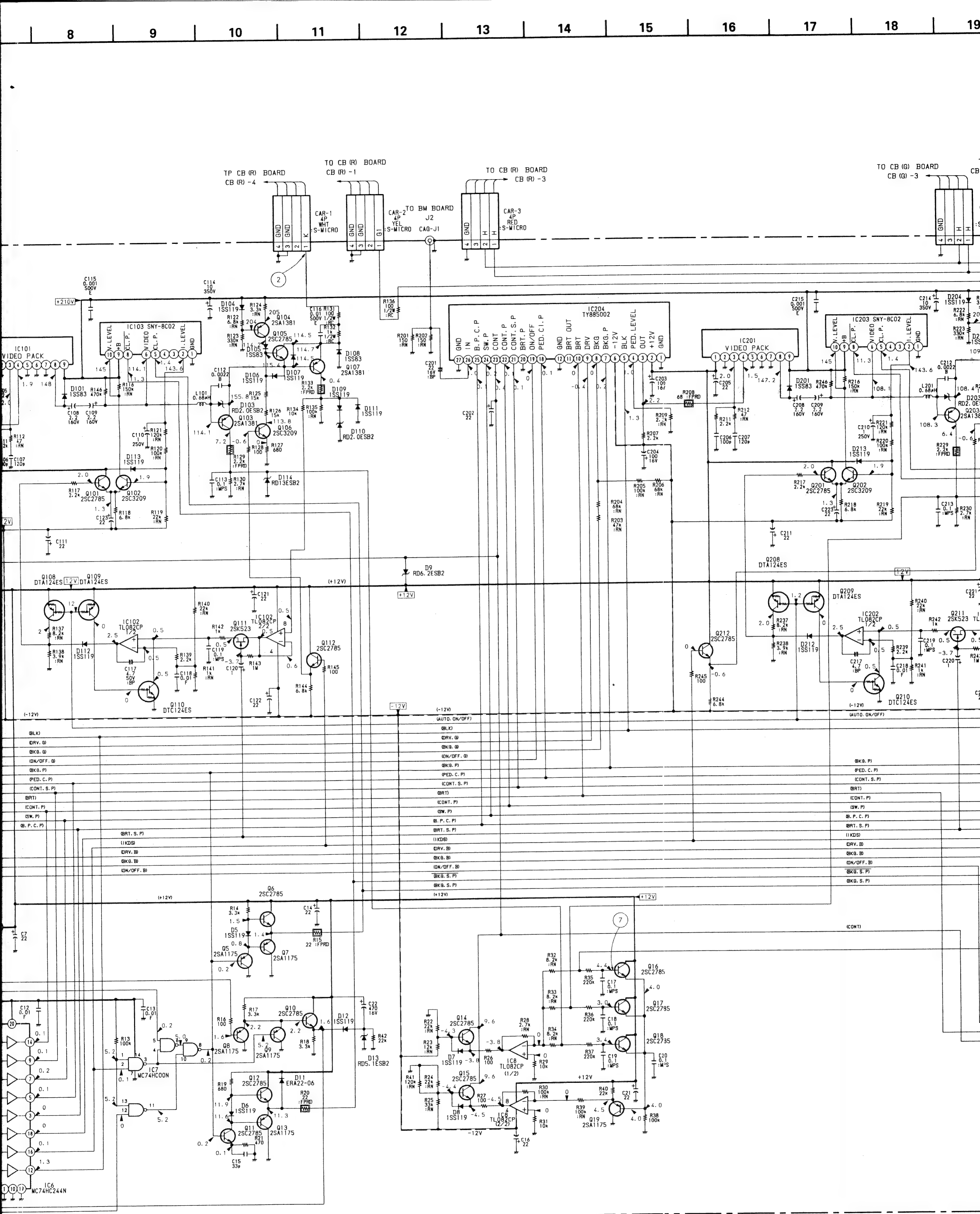


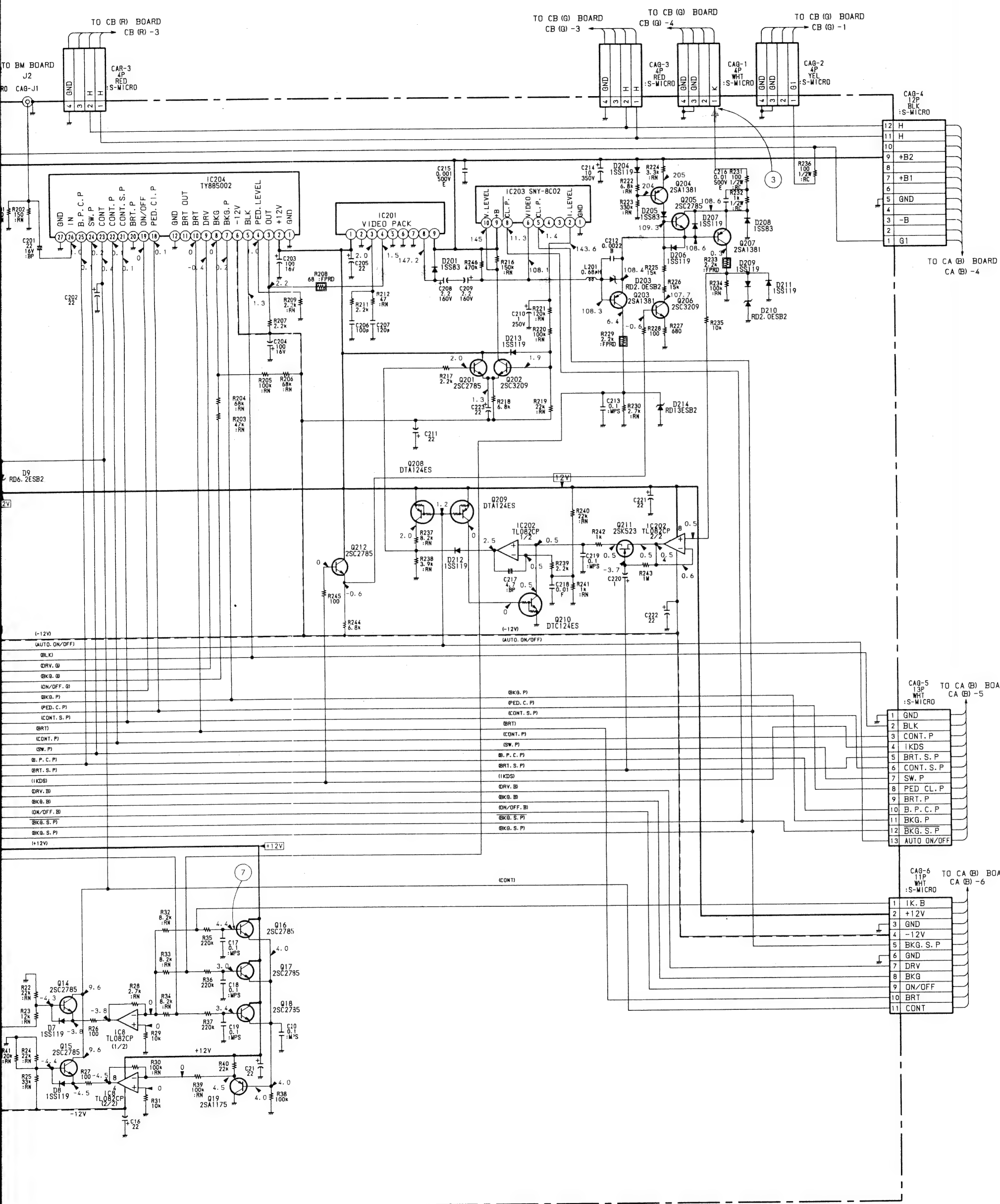


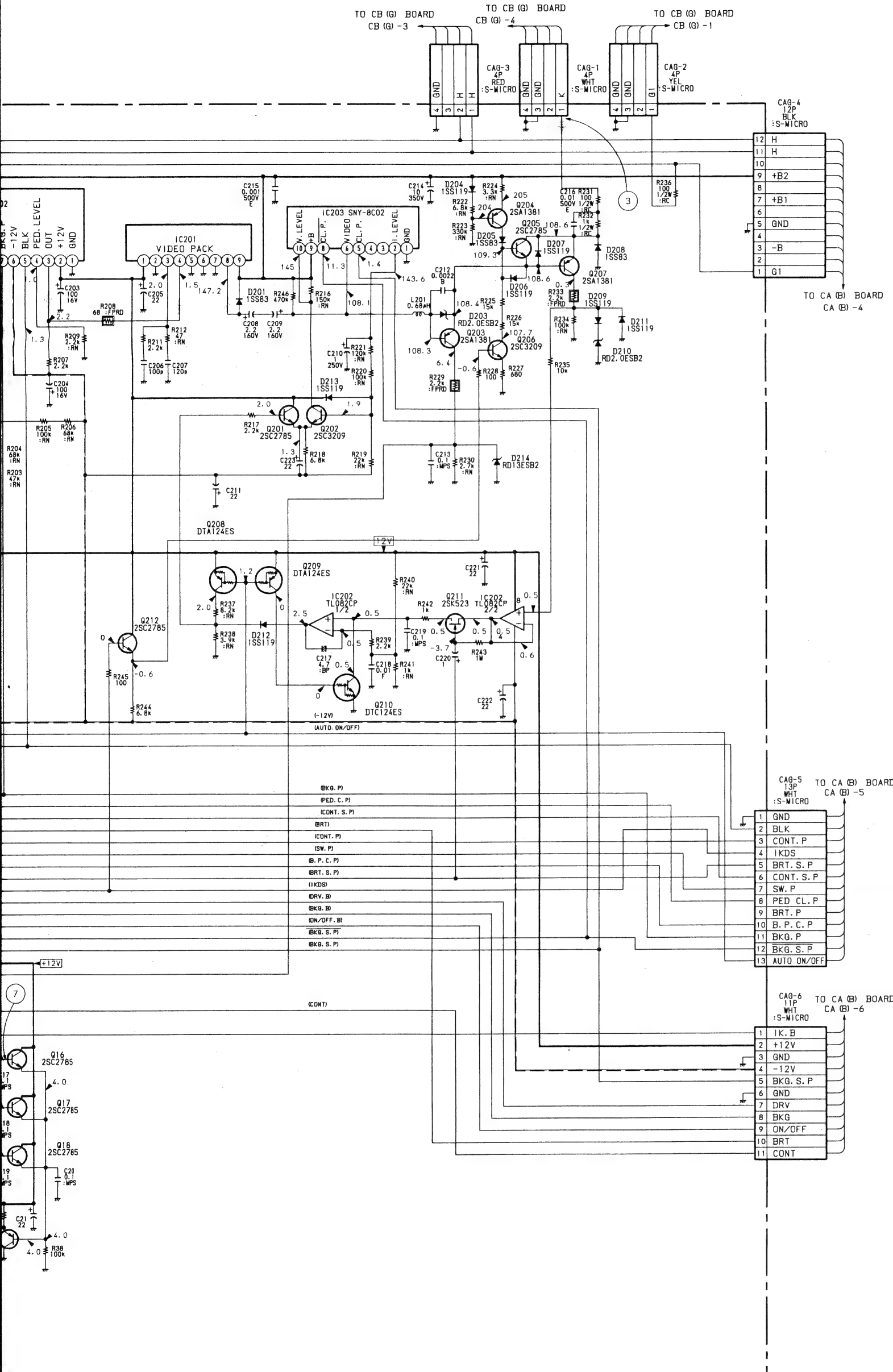
IC		Q16	C - 1	D5	E - 8
IC1	B - 7	Q17	C - 1	D6	E - 7
IC2	B - 8	Q18	C - 1	D7	B - 2
IC3	D - 13	Q19	C - 1	D8	B - 1
IC4	E - 13	Q101	B - 10	D9	E - 2
IC5	E - 12	Q102	B - 11	D11	E - 7
IC6	E - 11	Q103	A - 12	D12	E - 10
IC7	D - 12	Q104	B - 13	D13	E - 9
IC8	A - 2	Q105	A - 13	D101	B - 12
IC101	B - 11	Q106	A - 11	D103	A - 12
IC102	A - 9	Q107	A - 12	D104	B - 13
IC103	B - 12	Q108	A - 10	D105	B - 13
IC104	D - 10	Q109	A - 10	D106	A - 13
IC201	B - 5	Q110	B - 10	D107	A - 13
IC202	A - 3	Q111	A - 9	D108	A - 13
IC203	B - 7	Q112	B - 9	D109	A - 12
IC204	D - 4	Q113	C - 12	D110	A - 12
		Q201	B - 5	D111	A - 12
		Q202	B - 5	D112	A - 10
		Q203	A - 6	D113	B - 11
TRANSISTOR		Q204	A - 7	D114	A - 11
Q1	E - 3	Q205	A - 6	D115	C - 11
Q2	B - 8	Q206	A - 5	D201	B - 6
Q3	B - 8	Q207	A - 6	D203	A - 6
Q4	C - 8	Q208	A - 4	D204	A - 7
Q5	E - 8	Q209	A - 4	D205	A - 7
Q6	E - 9	Q210	B - 3	D206	A - 7
Q7	E - 8	Q211	A - 3	D207	A - 6
Q8	E - 9	Q212	B - 4	D208	A - 6
Q9	E - 9			D209	A - 5
Q10	E - 9	DIODE		D210	A - 5
Q11	E - 8			D211	A - 6
Q12	E - 7	D1	C - 7	D212	A - 4
Q13	E - 8	D2	B - 8	D213	B - 5
Q14	B - 2	J3	B - 9	D214	A - 5
Q15	A - 2	D4	A - 8		



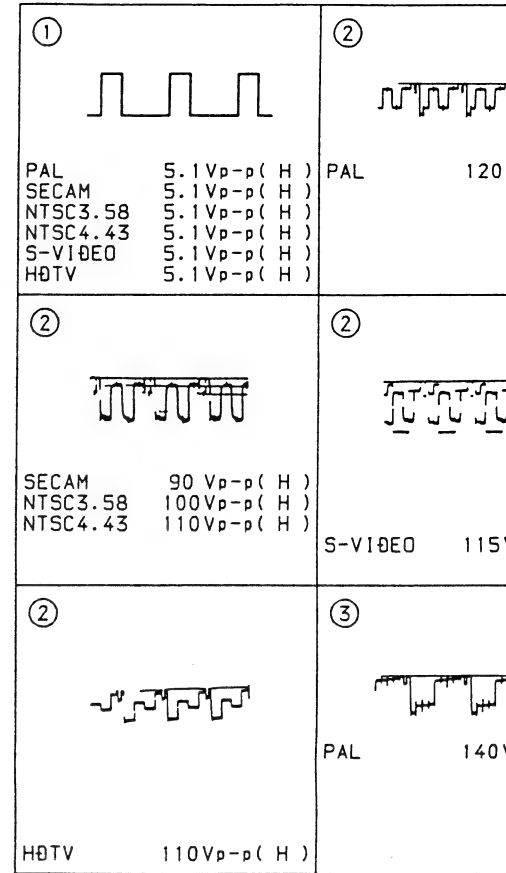
CARG (VIDEO OUT (R), VIDEO OUT (G))





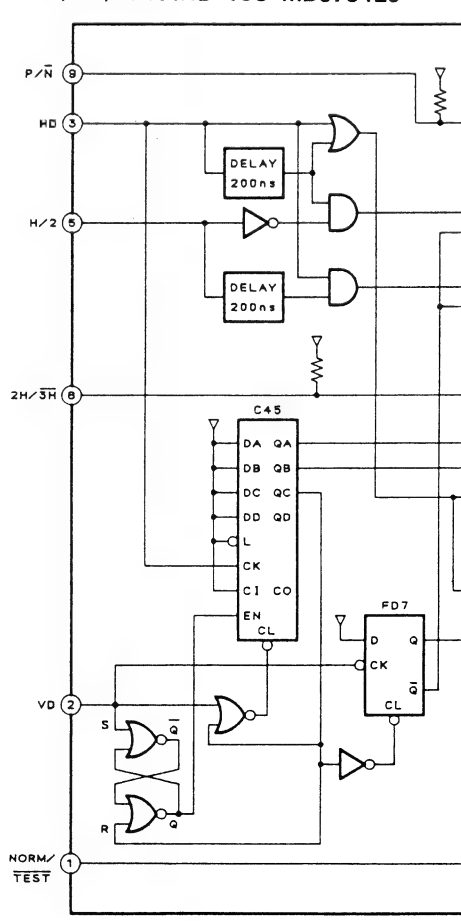


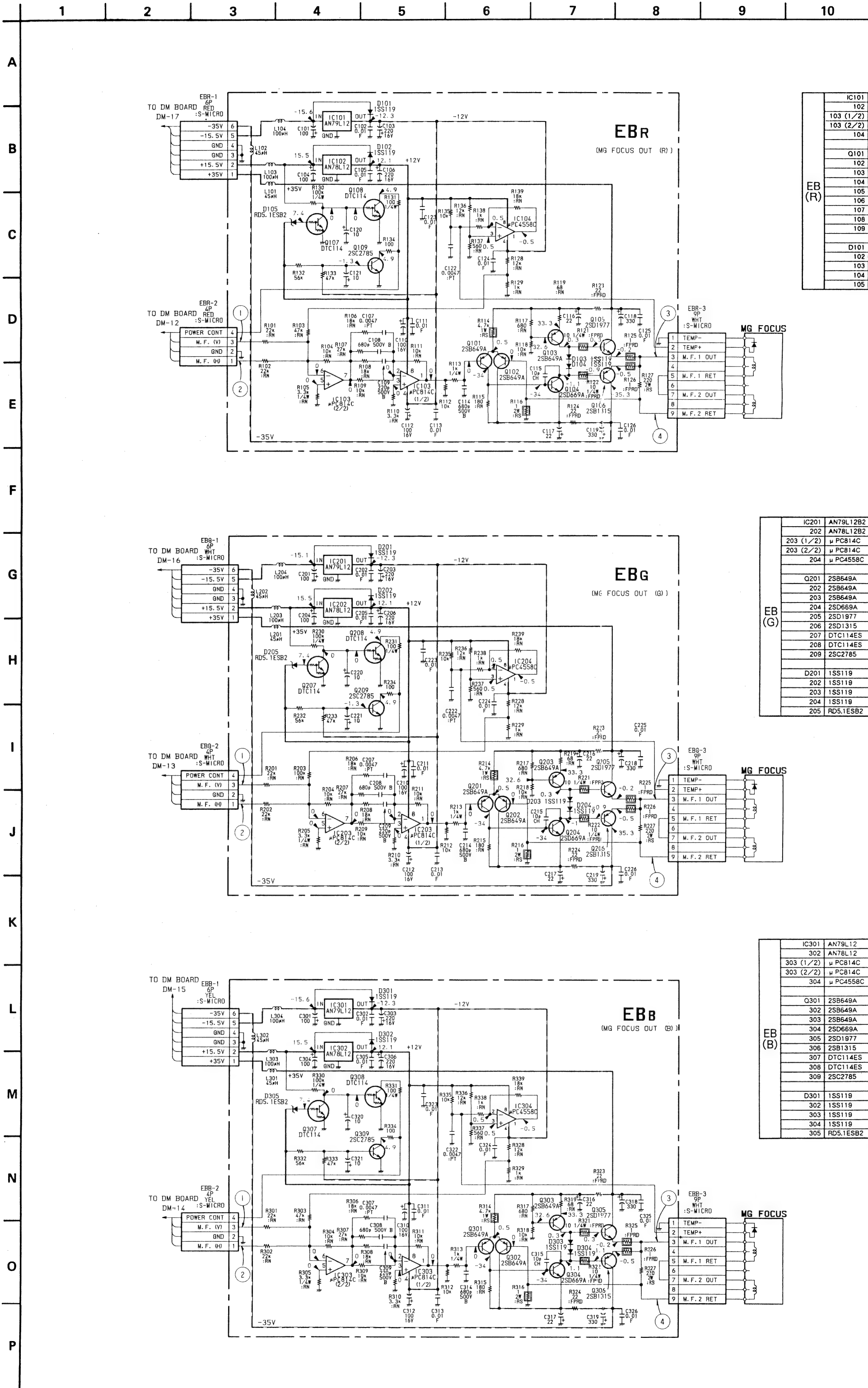
CA(RG) BOARD WAVEFORMS

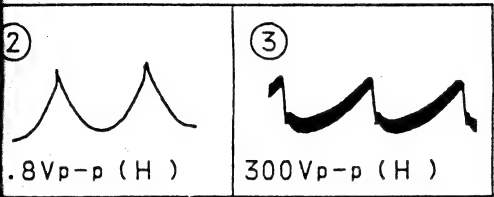


IC1	μ PC7912H	-12V REG	203	2S
2	μ PC7812H	+12V REG	204	2S
3	μ PC78L05	+5V REG	205	2S
4	MC74HC4538N	PULSE GEN	206	2S
5	MB675429	PULSE GEN	207	2S
6	MC74HC244N	PULSE GEN	208	DT
7	MC74HC00N	PULSE GEN	209	DT
8	TL082CP	PEAK & S.T. ABL	210	DT
101	VPH05	R VIDEO OUT	211	2S
102	TL082CP	R AUTO BKG	212	2S
103	SNY-8C02	R CLAMP		
104	TY885002	R SIGNAL PROCESS	D1	VO
201	VPH05	G VIDEO OUT	2	VO
202	TL082CP	G AUTO BKG	3	RD
203	SNY-8C02	G CLAMP	4	IS
204	TY885002	G SIGNAL PROCESS	5	IS
			6	IS
			7	IS
Q1	2SC2785	CONTRAST CONTROL	7	IS
2	DTC124ES	+12V PROT	8	IS
3	DTC124ES	+12V PROT	9	RD
4	2SC2785	-12V PROT	11	ER
5	2SA1175	BKG S.P. GEN	12	IS
6	2SC2785	BKG S.P. GEN	13	RD
7	2SA1175	BKG S.P. GEN	101	IS
8	2SA1175	BLK P. GEN	103	RD
9	2SA1175	BLK P. GEN	104	IS
10	2SC2785	BLK P. GEN	105	IS
11	2SC2785	BKG S.P. GEN	106	IS
12	2SC2785	BKG S.P. GEN	107	IS
13	2SA1175	BKG S.P. GEN	108	IS
14	2SC2785	PEAK ABL	109	IS
15	2SC2785	S.T. ABL	110	RD
16	2SC2785	B.S.T. ABL	111	IS
17	2SC2785	G.S.T. ABL	112	IS
18	2SC2785	R.S.T. ABL	113	IS
19	2SA1175	S.T. ABL	114	RD
101	2SC2785	R CLAMP	115	IS
102	2SC3209	R CLAMP	201	IS
103	2SA1381	R IK DET-1	203	RD
104	2SA1381	R CURRENT SOURCE	204	IS
105	2SC2785	R IK DET-2	205	IS
106	2SC3209	R IK DET-2	206	IS
107	2SA1381	R IK DET-2	207	IS
108	DTA124ES	R AUTO BKG SW	208	IS
109	DTA124ES	R AUTO BKG SW	209	IS
110	DTA124ES	R AUTO BKG SW	210	RD
111	2SK523	R AUTO BKG	211	IS
112	2SC2785	R IK DET-2	212	IS
113	2SC2785	R γ CORR	213	IS
201	2SC2785	G CLAMP	214	RD
202	2SC3209	G CLAMP		

CA(RG) BOARD IC5 MB675429

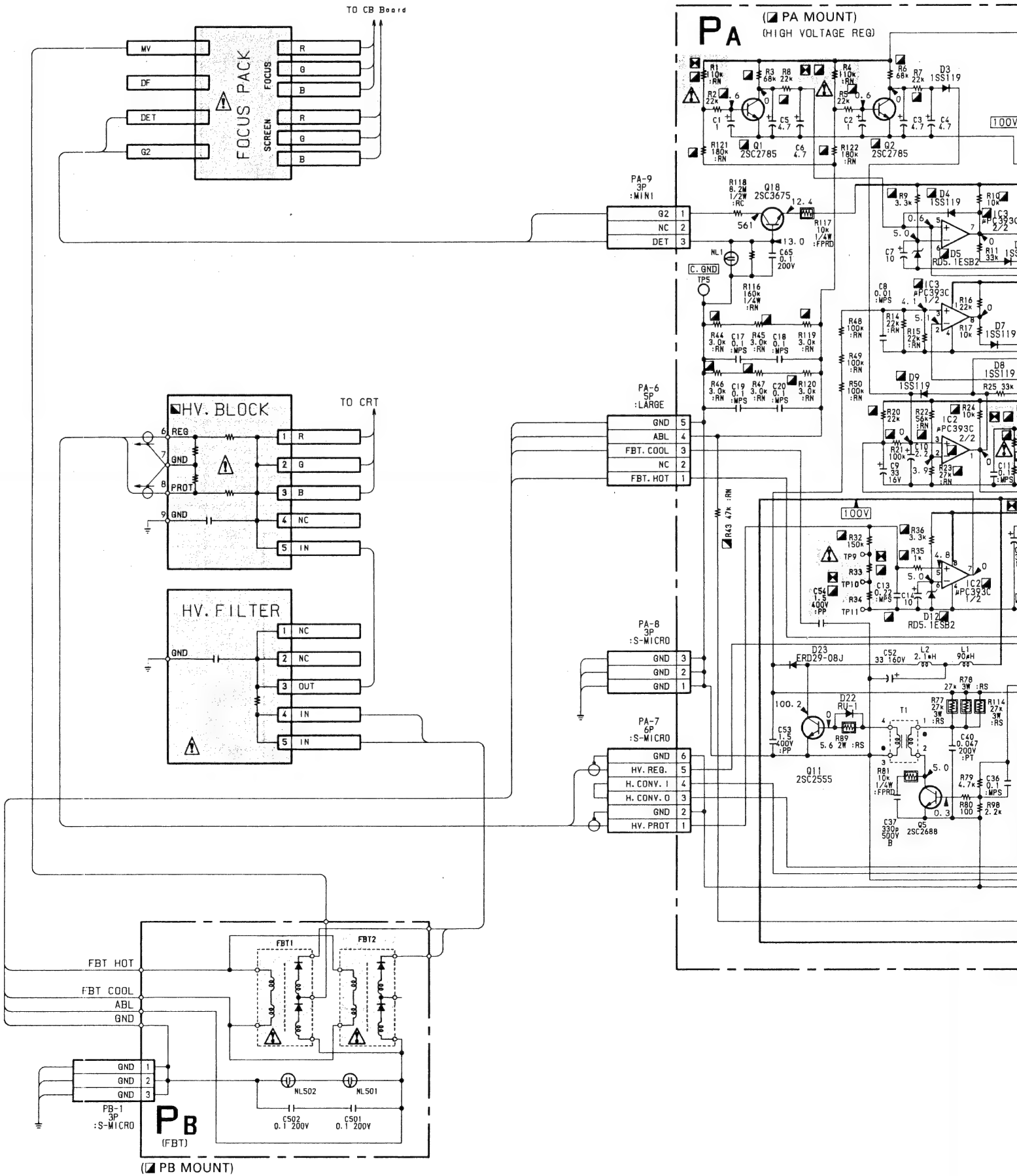
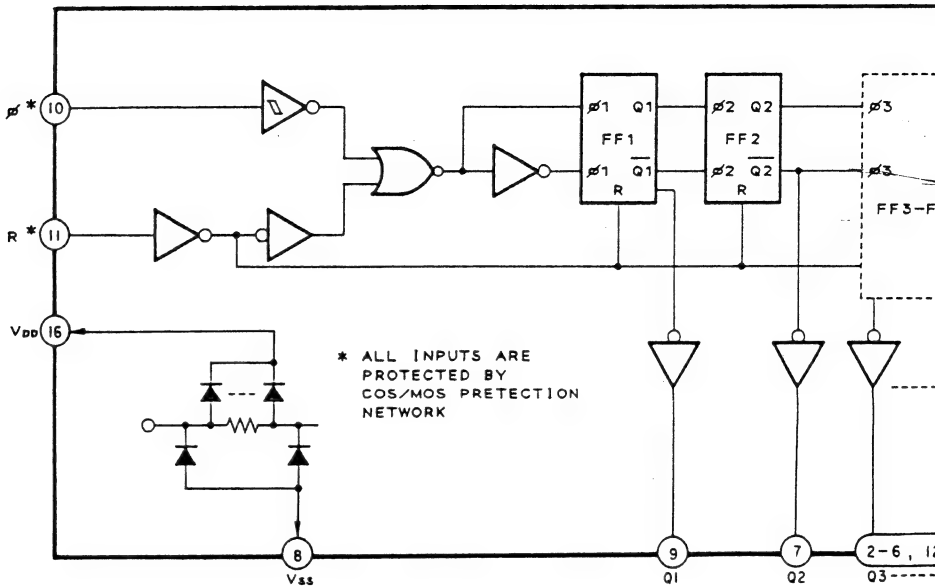


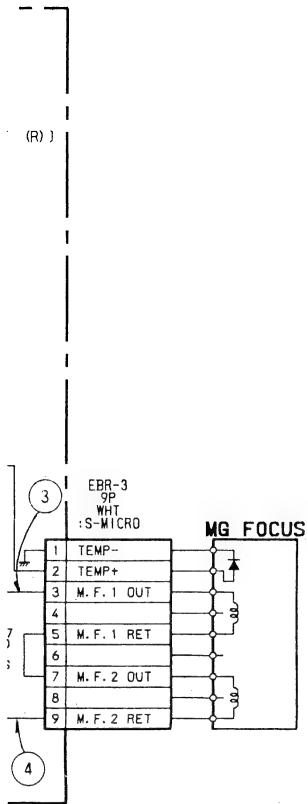




IC1 (1/2)	μ PC4082C	HV REG DET
1 (2/2)	μ PC4082C	LOW B PROT
2 (1/2)	μ PC393C	HV PROT DET
2 (2/2)	μ PC393C	HV PROT
3 (1/2)	μ PC393C	REG UP PROT
3 (2/2)	μ PC393C	Σ IK PROT
4 (1/2)	μ PC393C	HV PROT BUFF
4 (2/2)	μ PC393C	Σ IK PROT BUFF
5	μ PC78M12H	+12V REG
6	μ PC1394CH	HV REG CONTROL
7	TC4040BP	OSC DEV-1
8	MC14572UB	OSC DEV-2
9	TL431CLP	HV REG REF
Q1	2SC2785	Σ IK DET-1
2	2SC2785	Σ IK DET-2
3	2SA1175	OSC BUFF-1
4	2SA1175	OSC BUFF-2
5	2SC2688	HV REG DRIVE
6	2SC2688	HV CONV DRIVE
7	2SC2785	HV STOP SW-1
8	2SC2785	HV STOP SW-2
9	2SC2785	HV STOP SW-3
10	2SD1548	HV CONV
11	2SC2555	HV REG
12	2SA1175	POWER ON RESET-1
13	2SA1175	POWER OFF RESET
14	2SC2785	POWER ON RESET-2
15	2SC2785	POWER CONT
16	2SC2785	STOP BUFF
17	2SC2785	STOP INV
18	2SC3675	G2 REG
19	2SA1381	HV DRIVE CONT
20	2SA1175	REG OSC BUFF
D3	1SS119	Σ IK SW
4	1SS119	Σ IK HOLD
5	RD5.1ESB2	Σ IK ZENER
6	1SS119	REG STOP SW-1
7	1SS119	REG STOP SW-2
8	1SS119	REG STOP SW-3
9	1SS119	HV PROT HOLD
10	RD5.1ESB2	LOW B PROT ZENER
11	1SS119	REG STOP SW-4
12	RD5.1ESB2	HV PROT ZENER
13	1SS119	+12V HOLD
14	RD10ESB2	REG PROT
16	1SS119	OSC CLAMP
18	1SS119	+12V REG PROT
20	ERC06-15SA	DUMPER-1
21	ERC06-15SA	DUMPER-2
22	RU-1	SPEED UP-1
23	ERD29-08J	HV REG CLAMP
24	1SS119	STOP SW-1
25	1SS119	STOP SW-2
26	1SS119	REG STOP SW-5
27	RD10ESB2	LEBEL SHIFT
28	1SS119	STOP SW-3
29	1SS119	STOP SW-4

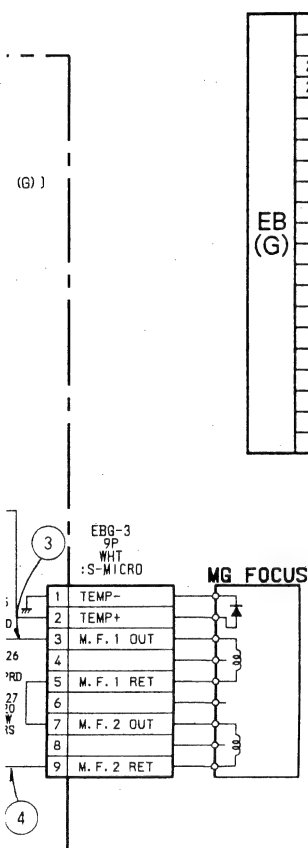
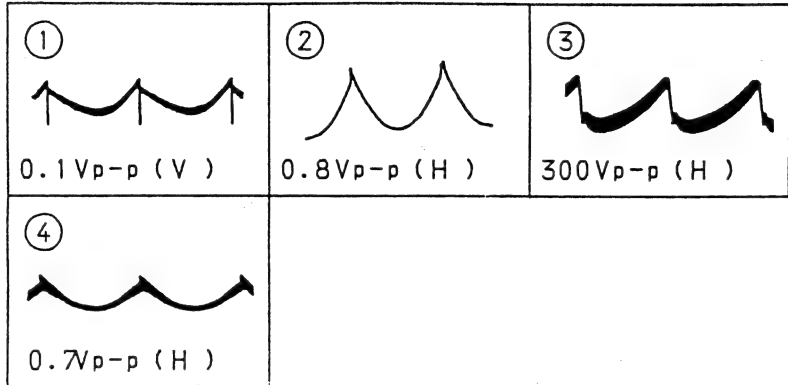
PA BOARD IC7 TC4040BP





EB (R)	IC101	AN79L12	-12V REG
	102	AN78L12	+12V REG
	103 (1/2)	μ PC814C	FILTER
	103 (2/2)	μ PC814C	WAVE COMPSITION
	104	μ PC4558C	TEMP CORRECT
	Q101	2SB649A	Mg FOCUS PRE AMP
	102	2SB649A	Mg FOCUS PRE AMP
	103	2SB649A	CONSTANT CURRENT
	104	2SD669A	Mg FOCUS DRIVE
	105	2SD1977	Mg FOCUS OUT
	106	2SB1315	Mg FOCUS OUT
	107	DTC114ES	PROTECT
	108	DTC114ES	PROTECT
	109	2SC2785	PROTECT
	D101	1SS119	PROTECT
	102	1SS119	PROTECT
	103	1SS119	BIAS
	104	1SS119	BIAS
	105	RD5.1ESB2	PROTECT

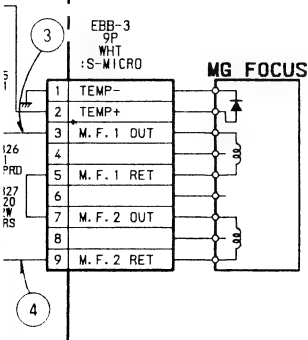
EB BOARD WAVEFORMS



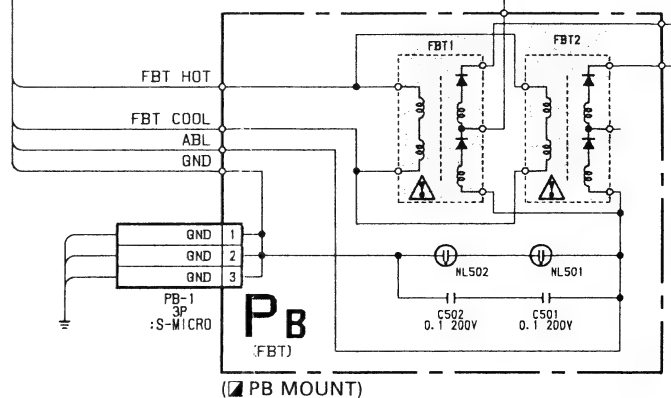
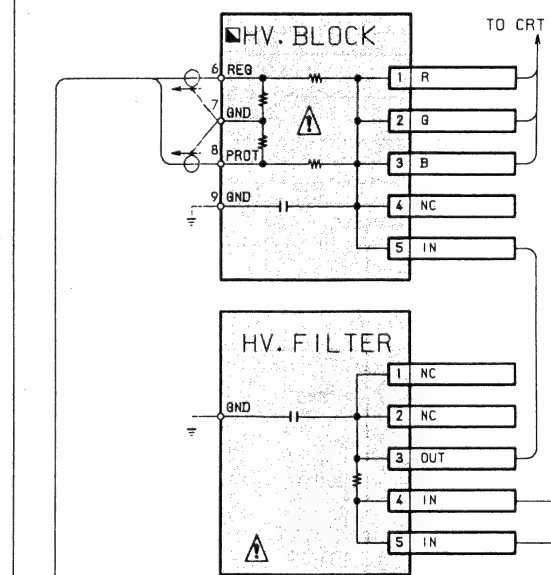
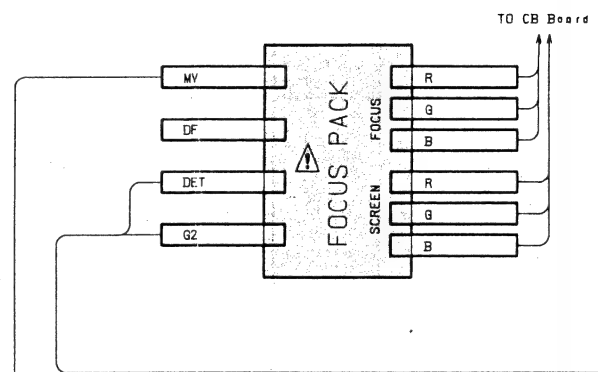
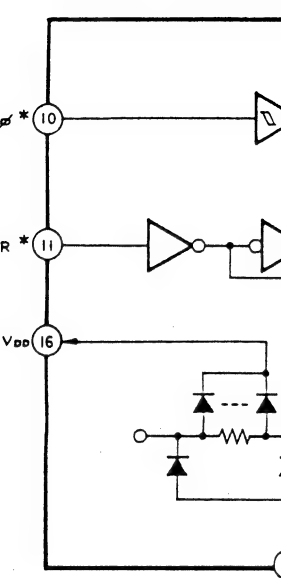
EB (G)	IC201	AN79L12B2	-12V REG
	202	AN78L12B2	+12V REG
	203 (1/2)	μ PC814C	FILTER
	203 (2/2)	μ PC814C	WAVE COMPSITION
	204	μ PC4558C	TEMP CORRECT
	Q201	2SB649A	Mg FOCUS PRE AMP
	202	2SB649A	Mg FOCUS PRE AMP
	203	2SB649A	Mg FOCUS PRE AMP
	204	2SD669A	Mg FOCUS DRIVE
	205	2SD1977	Mg FOCUS OUT
	206	2SD1315	Mg FOCUS OUT
	207	DTC114ES	PROTECT
	208	DTC114ES	PROTECT
	209	2SC2785	PROTECT
	D201	1SS119	PROTECT
	202	1SS119	PROTECT
	203	1SS119	BIAS
	204	1SS119	BIAS
	205	RD5.1ESB2	PROTECT

PA	IC1 (1/2)	μ PC4082C	HV REG DET
	1 (2/2)	μ PC4082C	LOW B PROT
	2 (1/2)	μ PC393C	HV PROT DET
	2 (2/2)	μ PC393C	HV PROT
	3 (1/2)	μ PC393C	REG UP PROT
	3 (2/2)	μ PC393C	Σ IK PROT
	4 (1/2)	μ PC393C	HV PROT BUFF
	4 (2/2)	μ PC393C	Σ IK PROT BUFF
	5	μ PC78M12H	+12V REG
	6	μ PC1394CH	HV REG CONTROL
	7	TC4040BP	OSC DEV-1
	8	MC14572UB	OSC DEV-2
	9	TL431CLP	HV REG REF
	Q1	2SC2785	Σ IK DET-1
	2	2SC2785	Σ IK DET-2
	3	2SA1175	OSC BUFF-1
	4	2SA1175	OSC BUFF-2
	5	2SC2688	HV REG DRIVE
	6	2SC2688	HV CONV DRIVE
	7	2SC2785	HV STOP SW-1
	8	2SC2785	HV STOP SW-2
	9	2SC2785	HV STOP SW-3
	10	2SD1548	HV CONV
	11	2SC2555	HV REG
	12	2SA1175	POWER ON RESET-1
	13	2SA1175	POWER ON RESET-2
	14	2SC2785	POWER CONT
	15	2SC2785	STOP BUFF
	16	2SC2785	STOP INV
	17	2SC3675	G2 REG
	18	2SA1381	HV DRIVE CONT
	19	2SA1175	REG OSC BUFF
	D3	1SS119	Σ IK SW
	4	1SS119	Σ IK HOLD
	5	RD5.1ESB2	Σ IK ZENER
	6	1SS119	REG STOP SW-1
	7	1SS119	REG STOP SW-2
	8	1SS119	REG STOP SW-3
	9	1SS119	REG STOP SW-4
	10	RD5.1ESB2	LOW B PROT ZENER
	11	1SS119	REG STOP SW-5
	12	RD5.1ESB2	HV PROT ZENER
	13	1SS119	+12V HOLD
	14	RD10ESB2	REG PROT
	16	1SS119	OSC CLAMP
	18	1SS119	+12V REG PROT
	20	ERC06-15SA	DUMPER-1
	21	ERC06-15SA	DUMPER-2
	22	RU-1	SPEED UP-1
	23	ERD29-08J	HV REG CLAMP
	24	1SS119	STOP SW-1
	25	1SS119	STOP SW-2
	26	1SS119	REG STOP SW-5
	27	RD10ESB2	LEBEL SHIFT
	28	1SS119	STOP SW-3
	29	1SS119	STOP SW-4

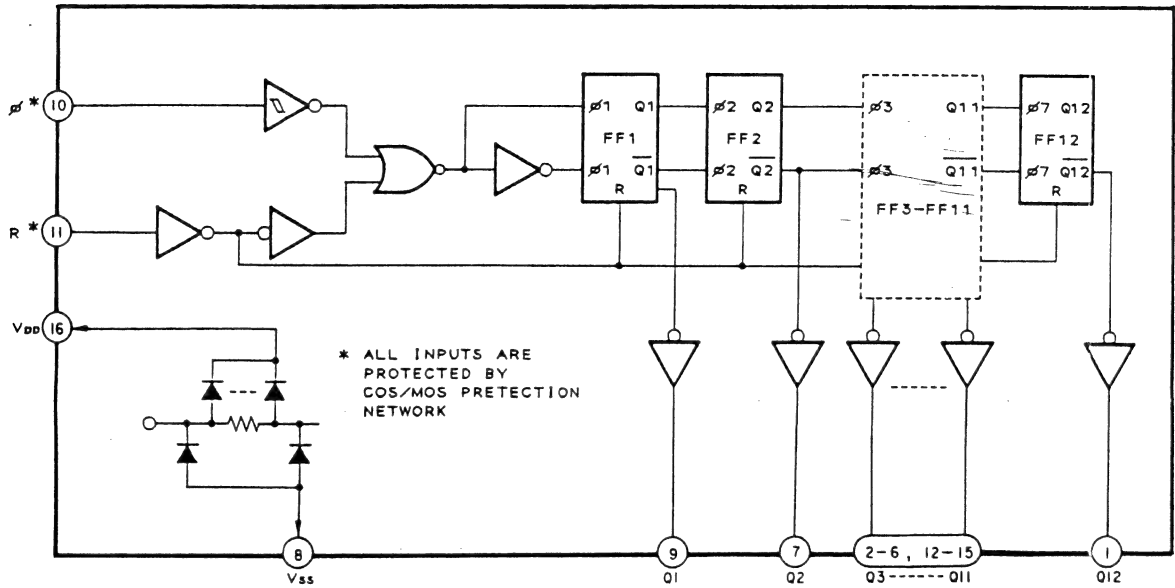
EB (B)	IC301	AN79L12	-12V REG
	302	AN78L12	+12V REG
	303 (1/2)	μ PC814C	FILTER
	303 (2/2)	μ PC814C	WAVE COMPSITION
	304	μ PC4558C	TEMP CORRECT
	Q301	2SB649A	Mg FOCUS PRE AMP
	302	2SB649A	Mg FOCUS PRE AMP
	303	2SB649A	CONSTANT CURRENT
	304	2SD669A	Mg FOCUS DRIVE
	305	2SD1977	Mg FOCUS OUT
	306	2SB1315	Mg FOCUS OUT
	307	DTC114ES	PROTECT
	308	DTC114ES	PROTECT
	309	2SC2785	PROTECT
	D301	1SS119	PROTECT
	302	1SS119	PROTECT
	303	1SS119	BIAS
	304	1SS119	BIAS
	305	RD5.1ESB2	PROTECT



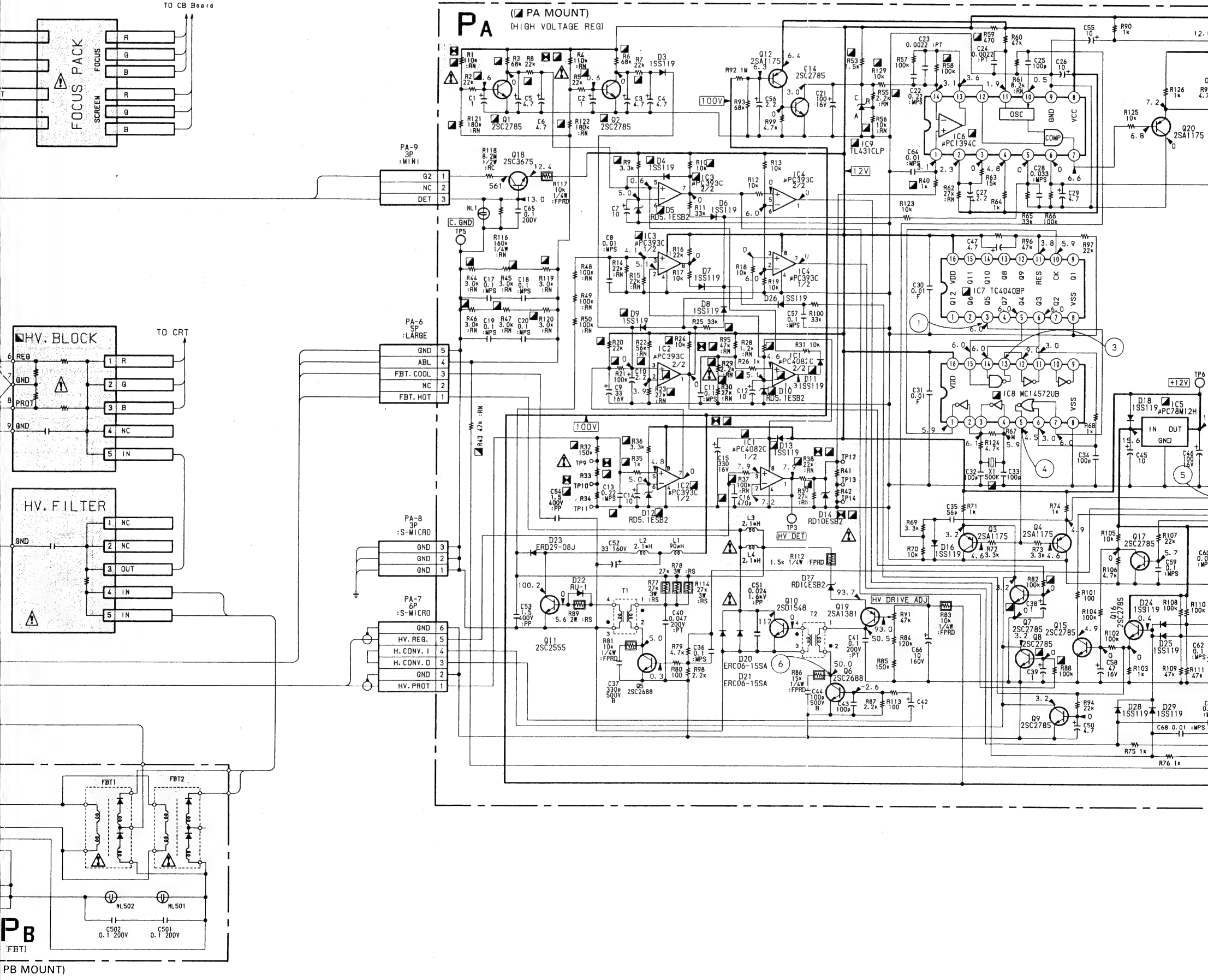
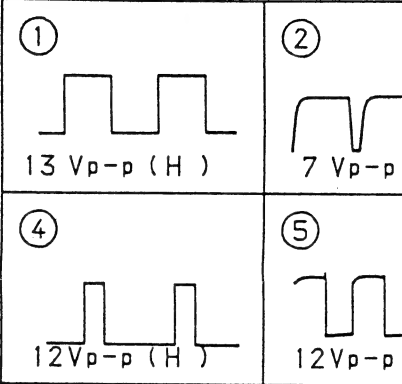
PA BOARD IC7 TO

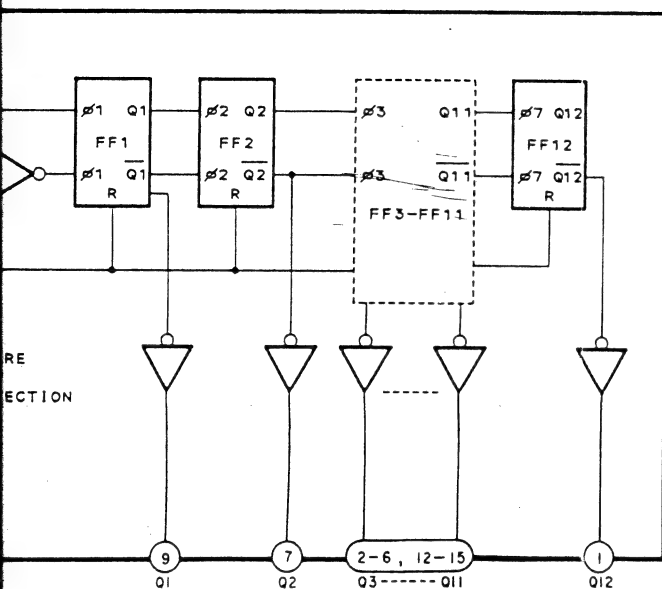


PA BOARD IC7 TC4040BP

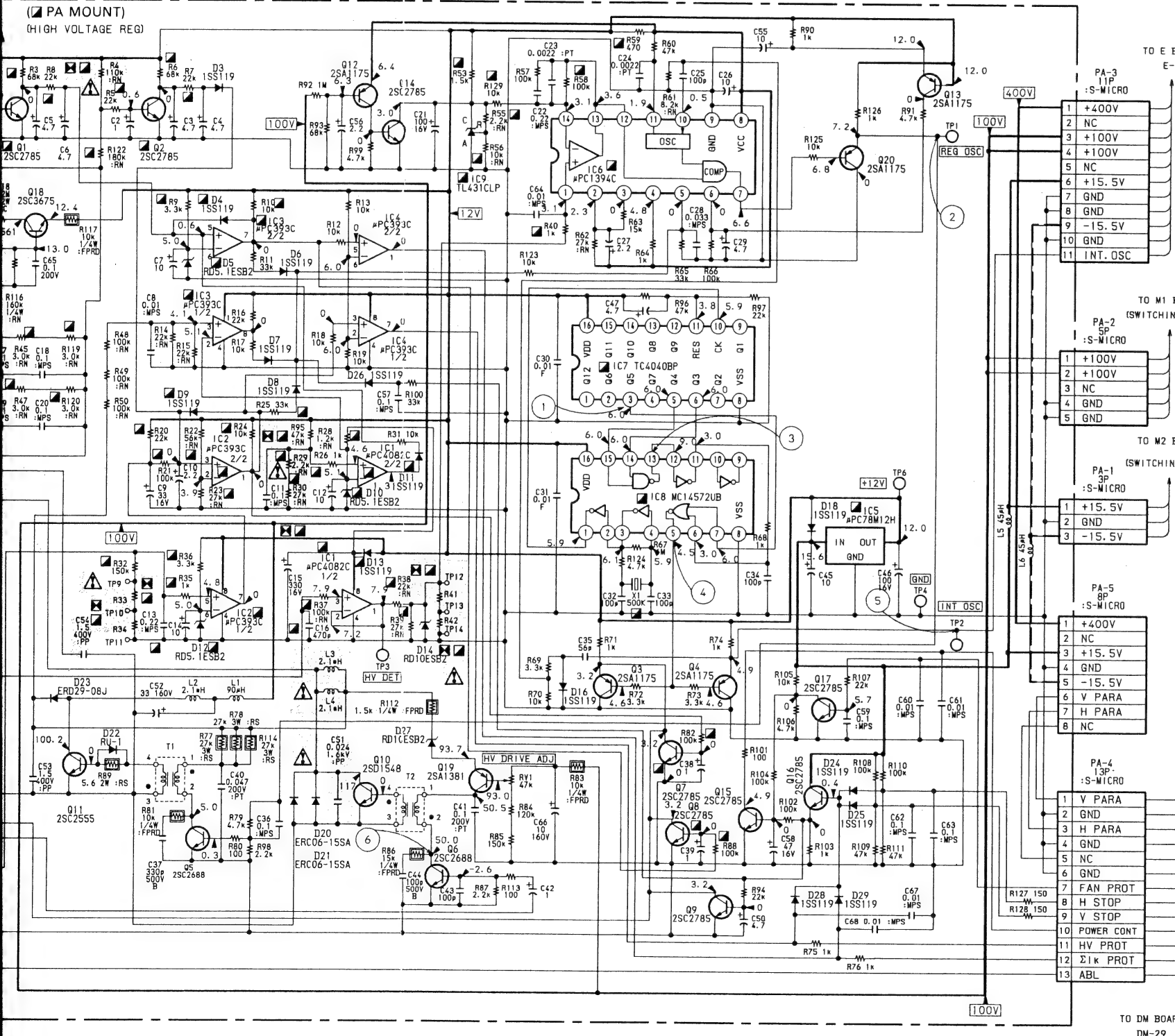
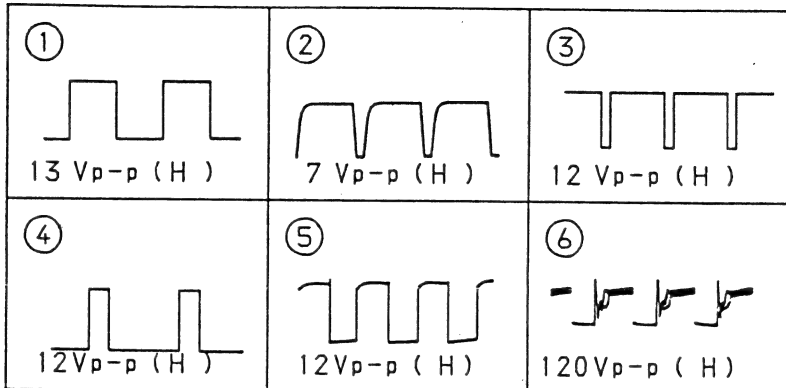


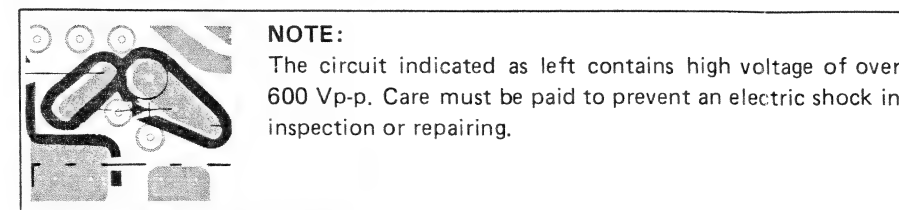
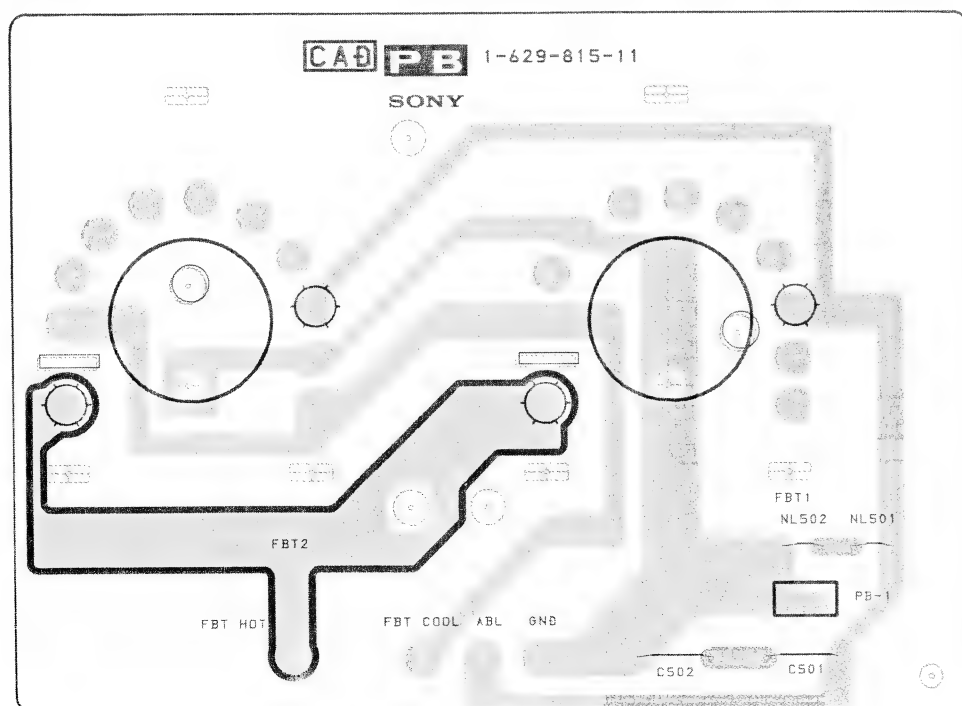
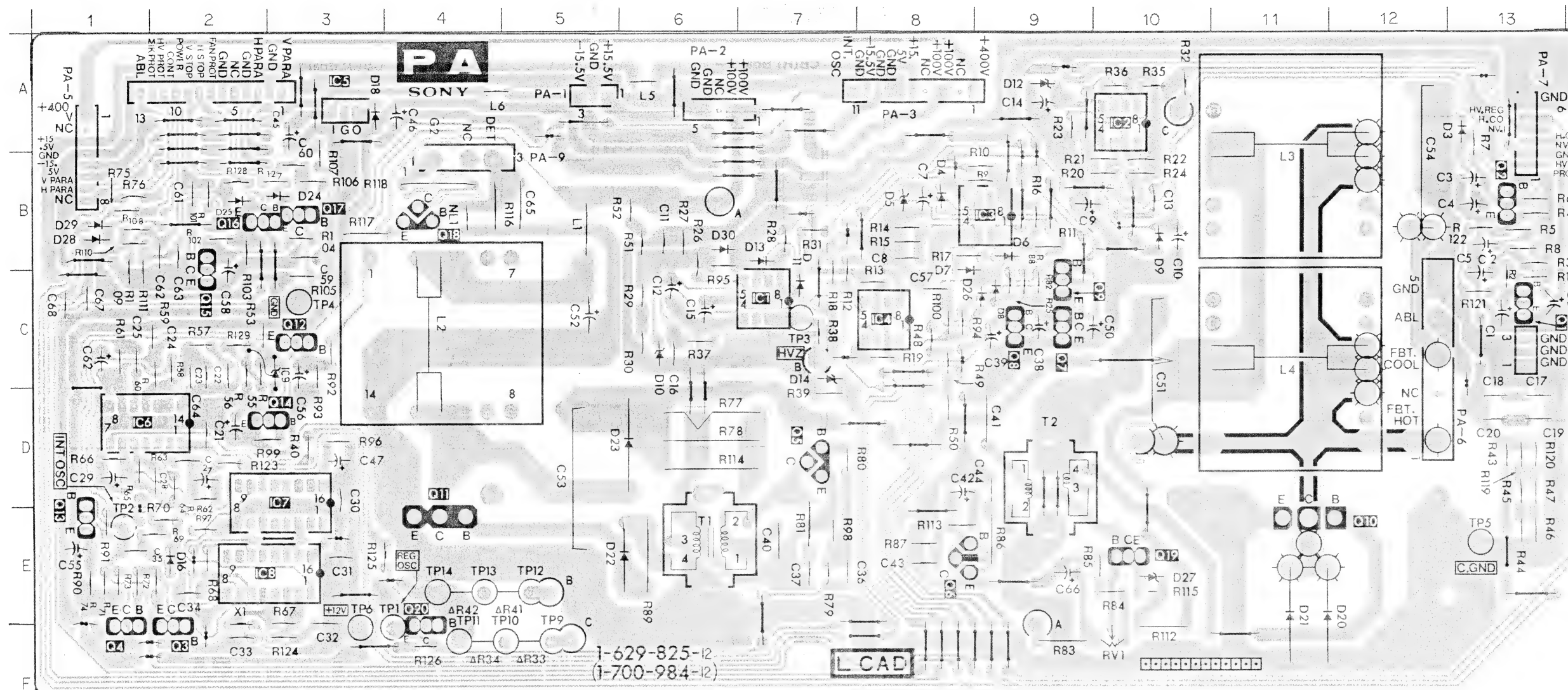
PA BOARD WAVEFORMS





PA BOARD WAVEFORMS





NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

IC	
IC1	C-7
IC2	A-10
IC3	B-9
IC4	C-8
IC5	A-3
IC6	D-1
IC7	D-3
IC8	E-3
IC9	C-3

TRANSISTOR	
Q1	C-13
Q2	B-13
Q3	F-2
Q4	F-1
Q5	D-7
Q6	E-8
Q7	C-9
Q8	C-9
Q9	C-9
Q10	E-11
Q11	E-4
Q12	C-3
Q13	E-1
Q14	D-3
Q15	C-2
Q16	B-2
Q17	B-3
Q18	B-4
Q19	E-10
Q20	F-4

DIODE	
D3	A-13
D4	B-8
D5	B-8
D6	B-9
D7	C-8
D8	C-9
D9	B-10
D10	C-6
D11	C-7
D12	A-9
D13	B-7
D14	C-7
D16	E-2
D18	A-3
D20	E-11
D21	E-11
D22	E-6
D23	D-6
D24	B-3
D25	B-2
D26	C-9
D27	E-10
D28	B-1
D29	B-1

VARIABLE RESISTOR	
RV1	F-10

EB(R) [Mg FOCUS OUT(R)]

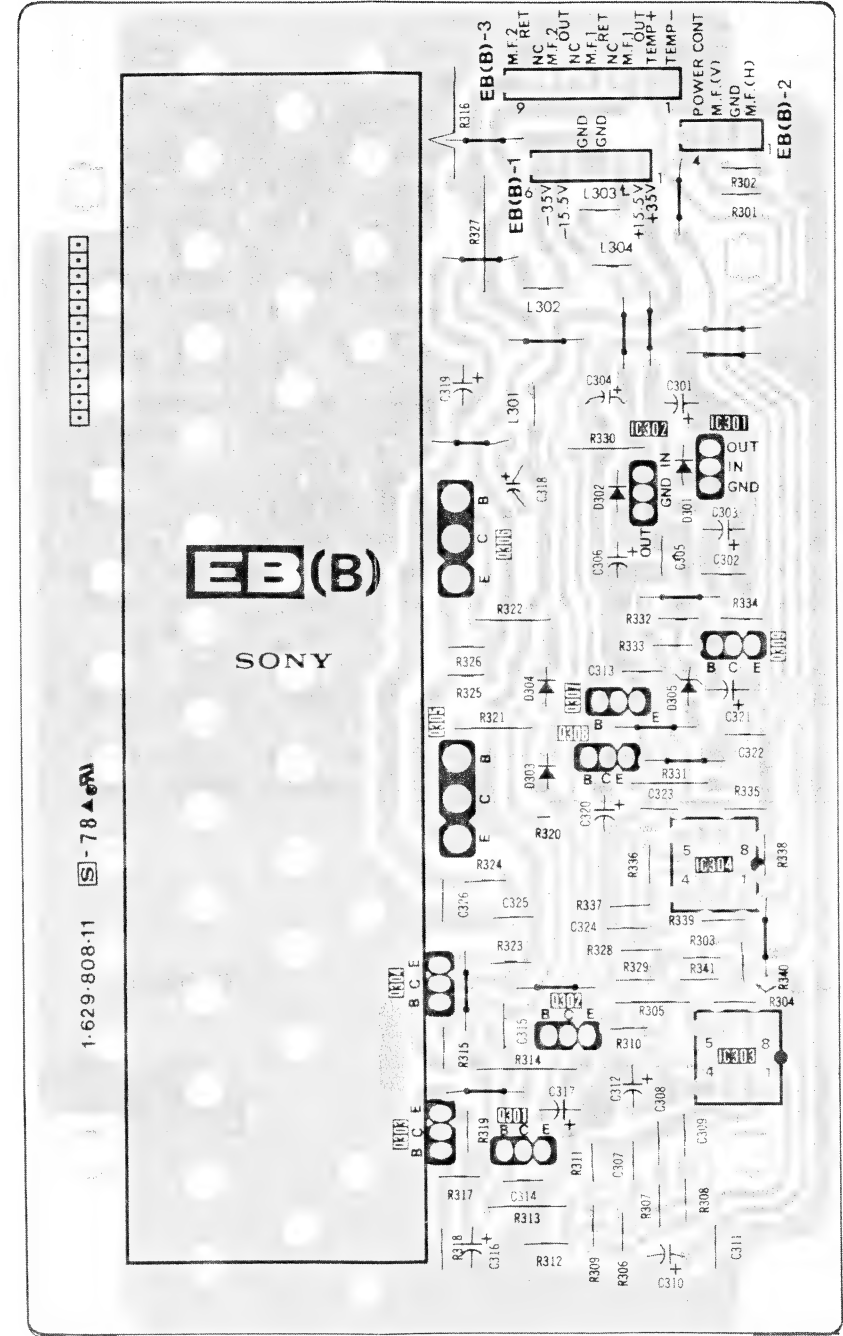
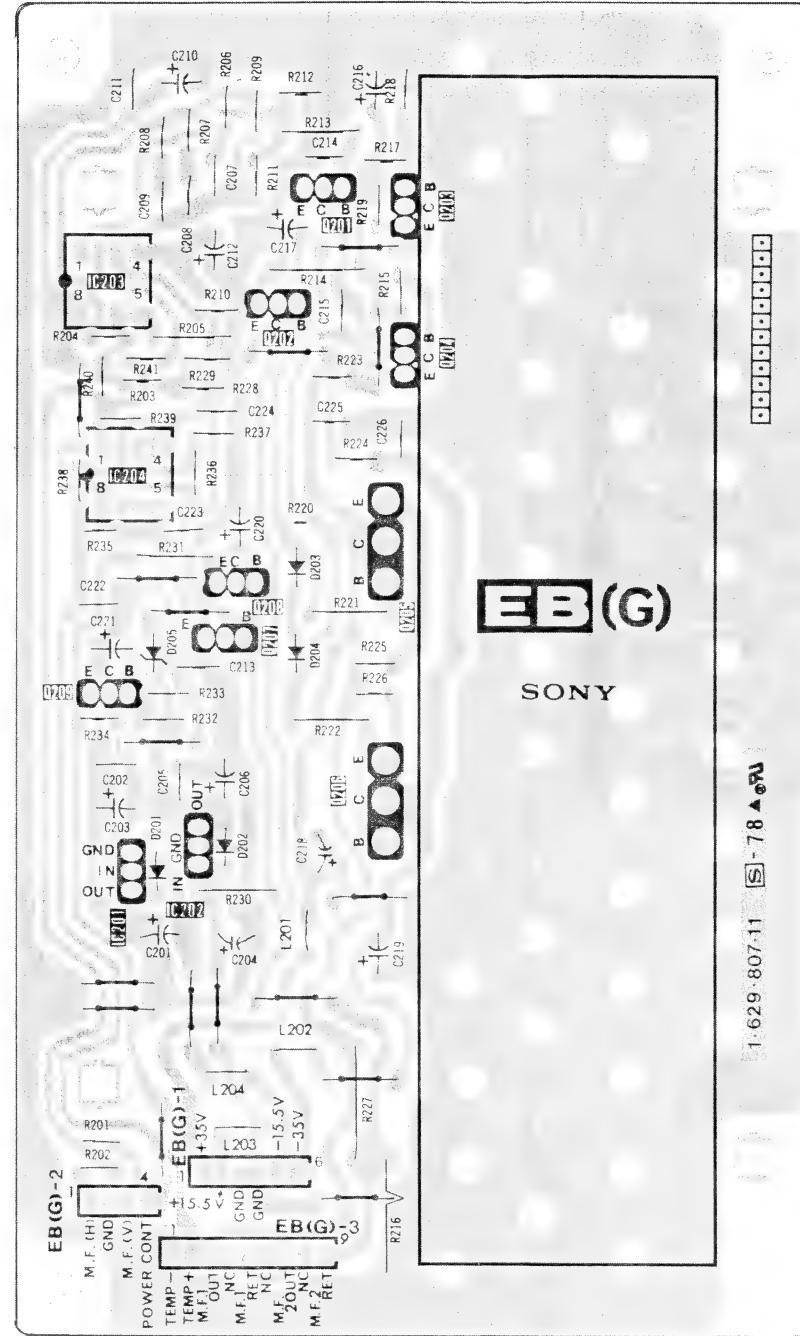
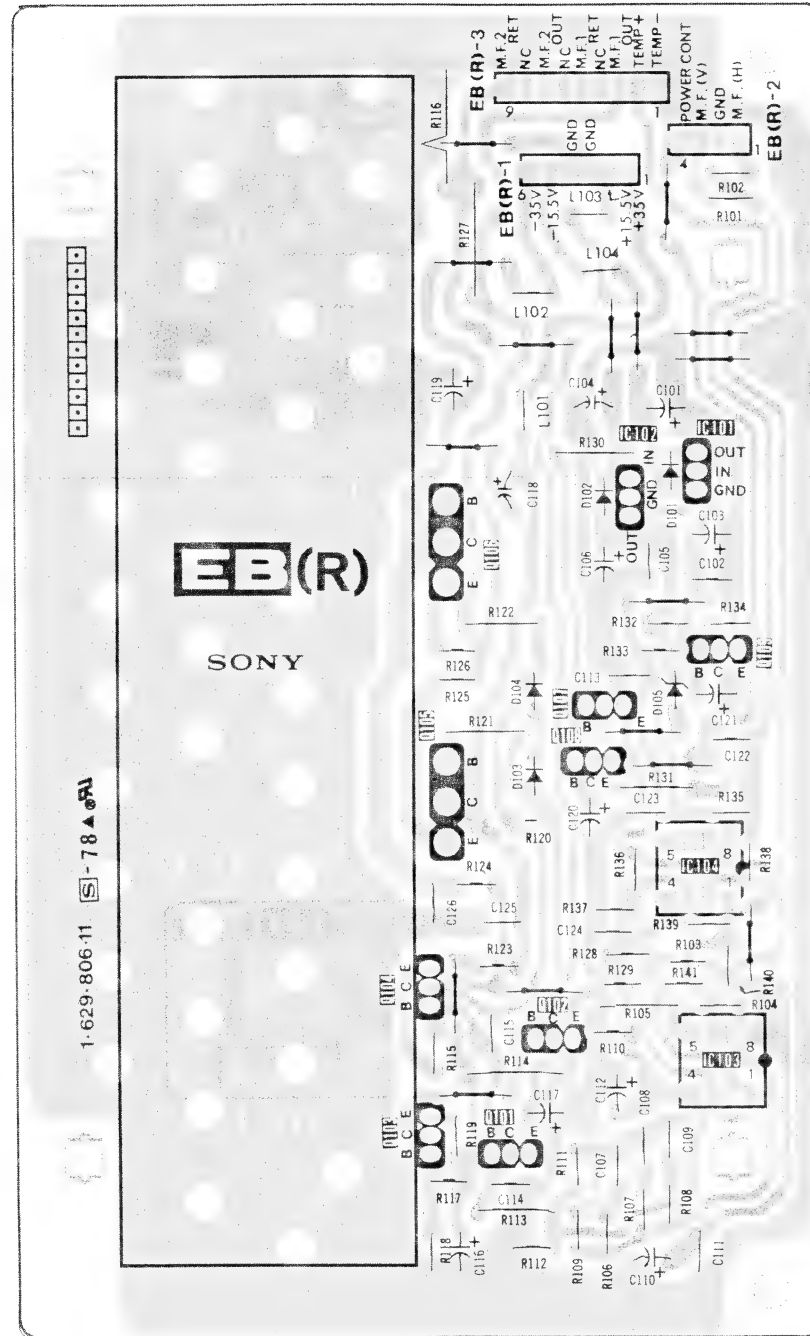
EB(G) [Mg FOCUS OUT(G)]

EB(B) [Mg FOCUS OUT(B)]

— EB(R) Board —

— EB(G) Board —

— EB(B) Board —



RCA

R CB

Rcc

R_{CD}

Rc

[CONTROL]

L

[LENS FOCUS CONT]

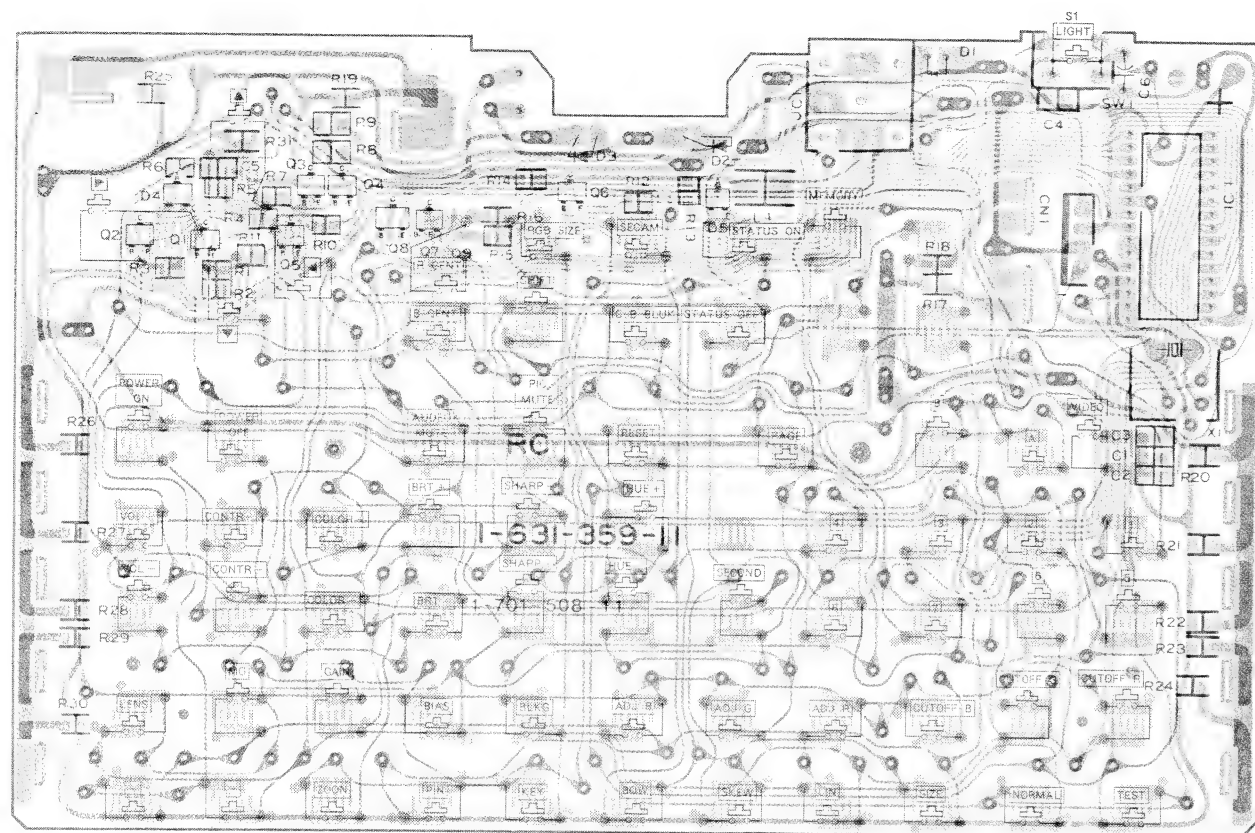
NA

[RECEIVER]

NB

[RECEIVER]

– RC Board –



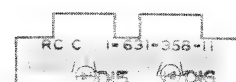
— RCA Board —



— RCB Board —



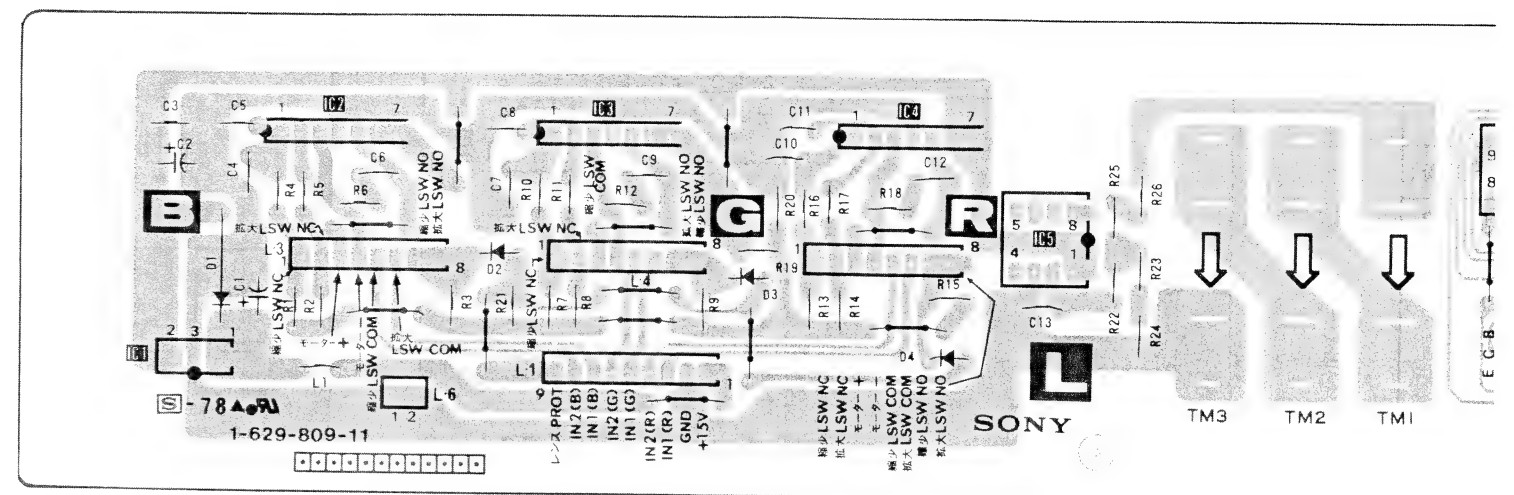
— RCC Board —



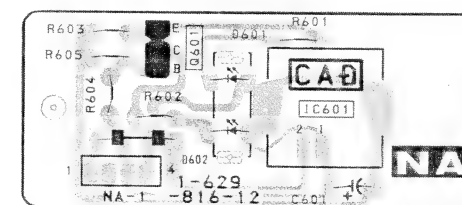
– RCD Board –



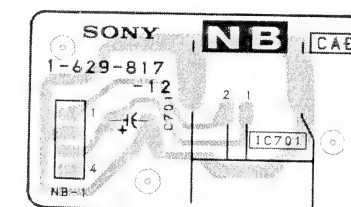
– L Board –



—NA Board —



— NB Board —



CB(R)

[CRT SOCKET]

CB(G)

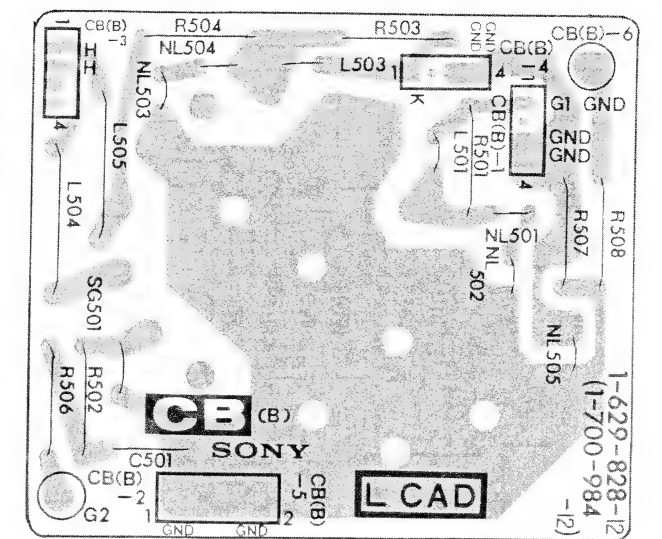
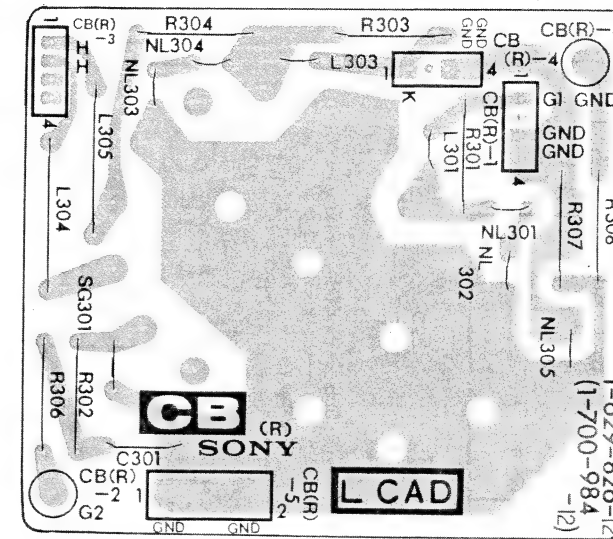
[CRT SOCKET]

CB(B)

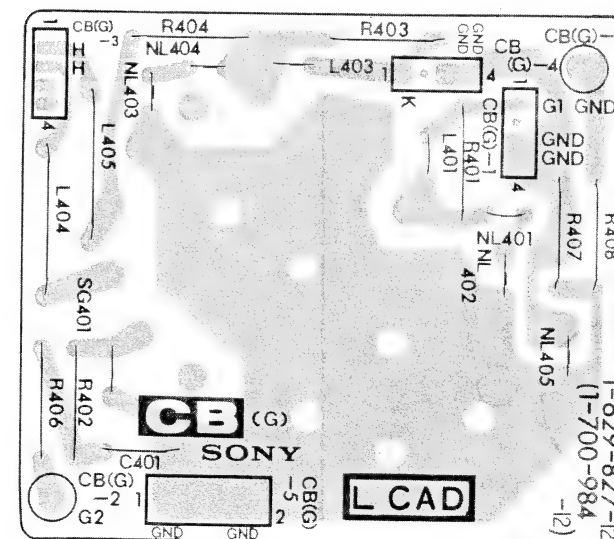
[CRT SOCKET]

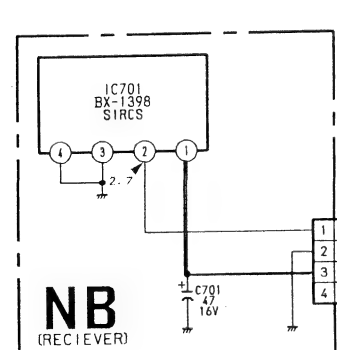
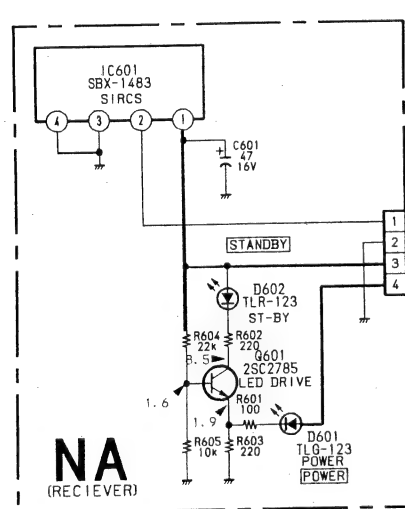
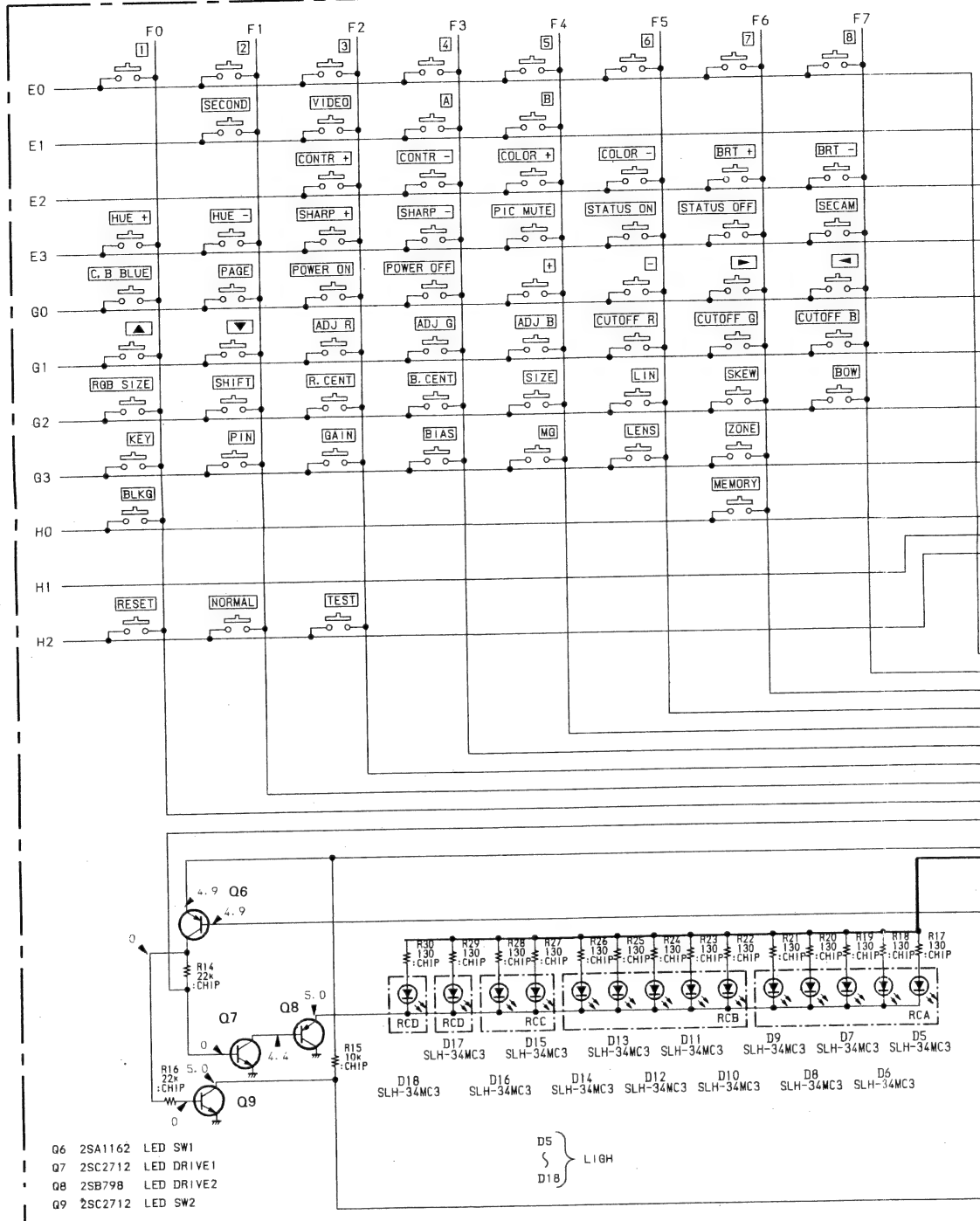
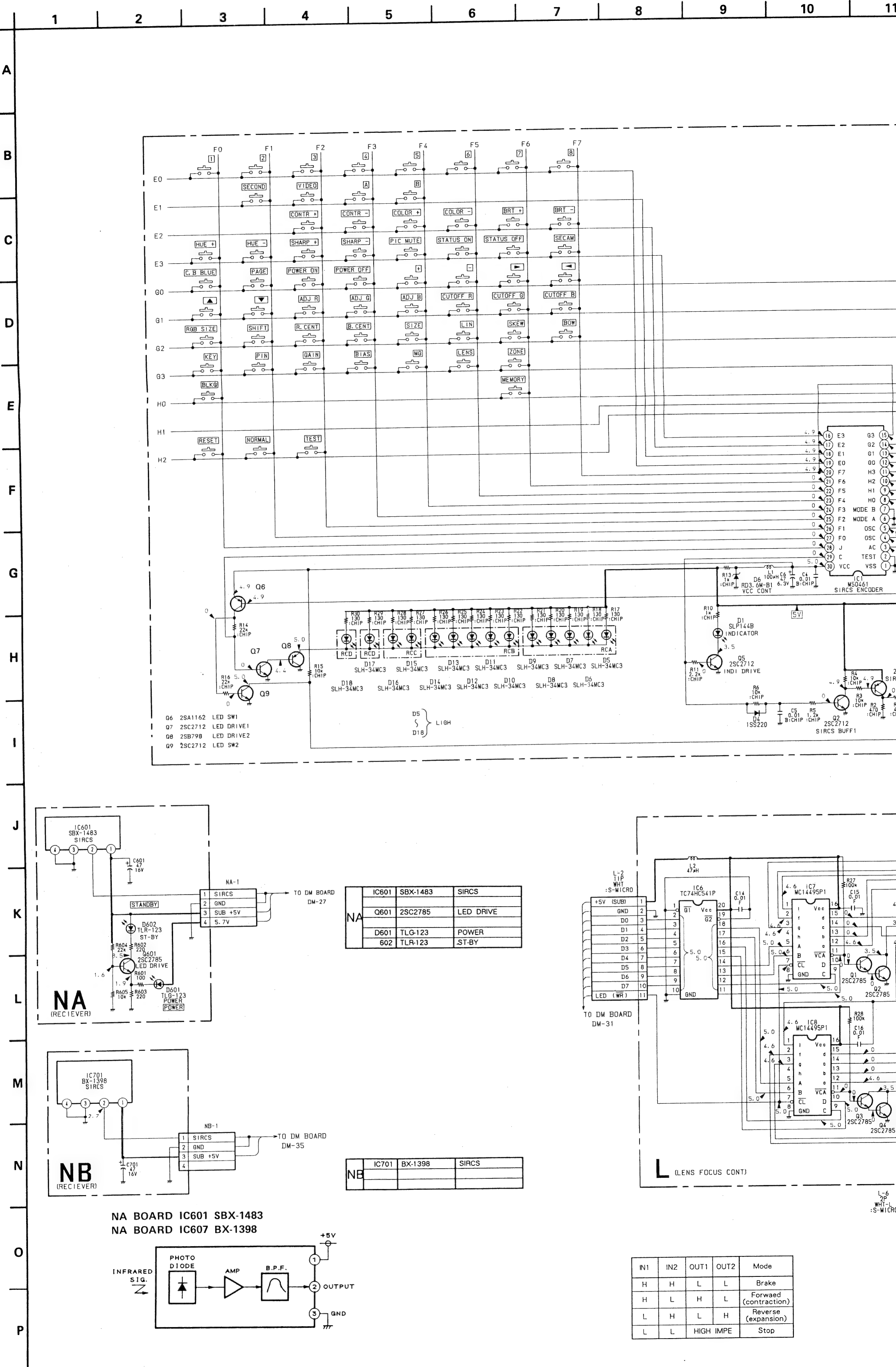
— CB(R) Board —

— CB(B) Board —

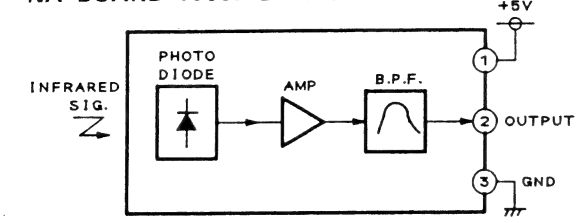


— CB(G) Board —



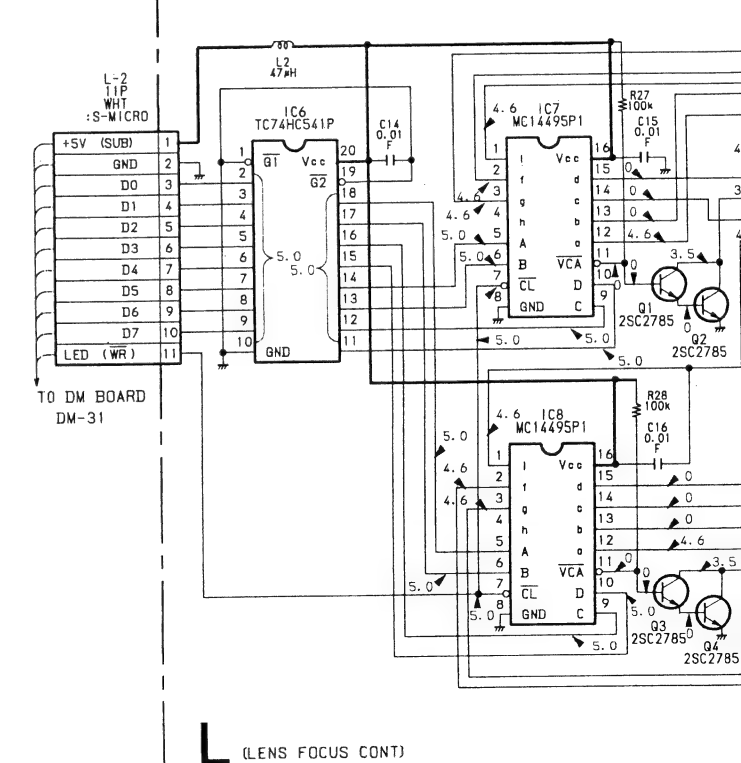


NA BOARD IC601 SBX-1483
NA BOARD IC607 BX-1398

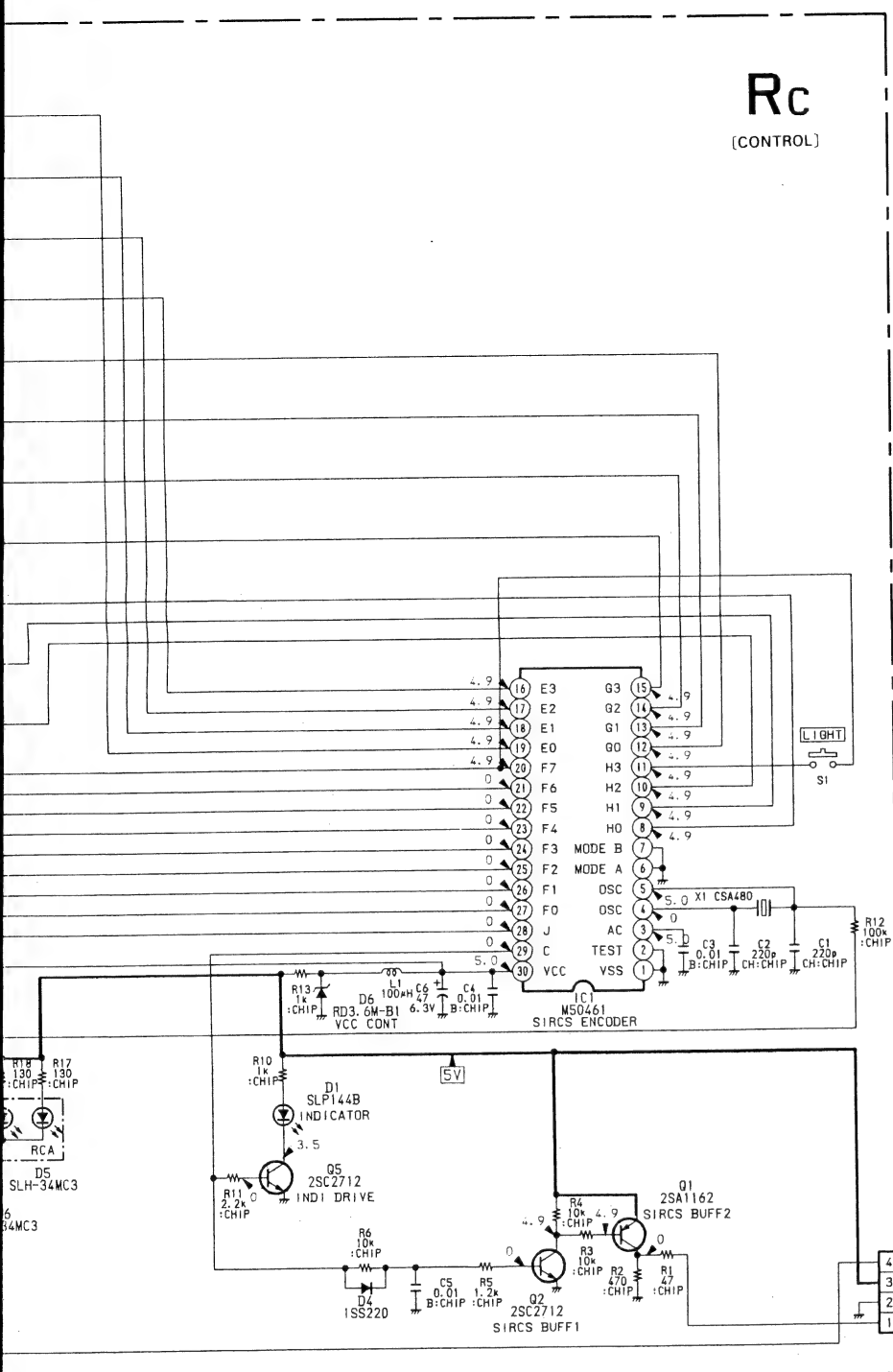


IC601	SBX-1483	SIRCS
Q601	2SC2785	LED DRIVE
D601	TLR-123	POWER
602	TLR-123	ST-BY

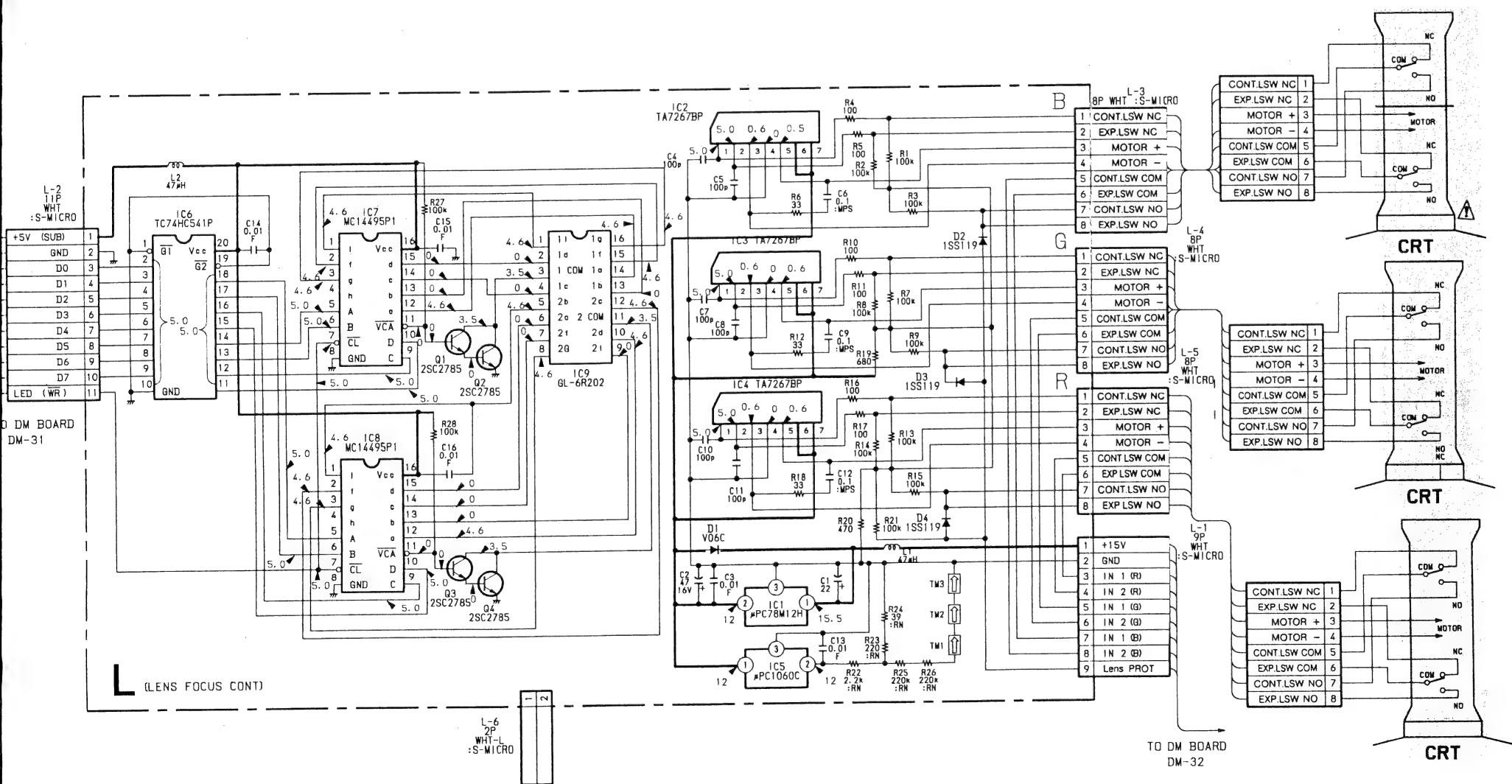
IC701	BX-1398	SIRCS
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IN1	IN2	OUT1	OUT2	Mode
H	H	L	L	Brake
H	L	H	L	Forward (contraction)
L	H	L	H	Reverse (expansion)
L	L	HIGH IMPE		Stop

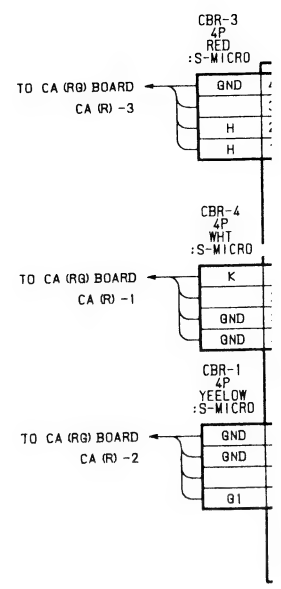


IC1	PC78M12H	+12V REG
2	TA7267BP	MOTOR DRIVE
3	TA7267BP	MOTOR DRIVE
4	TA7267BP	MOTOR DRIVE
5	PC1060C	CONSTANT VOLTAGE
6	TC74HC541P	DECODER
7	MC14495P1	DECODER
8	MC14495P1	DECODER
9	GL-6R202	DISPLAY
O1	2SC2785	BUFFER
2	2SC2785	BUFFER
3	2SC2785	BUFFER
4	2SC2785	BUFFER
D1	V06C	PROTECT
2	1SS119	SWITCH
3	1SS119	SWITCH
4	1SS119	SWITCH

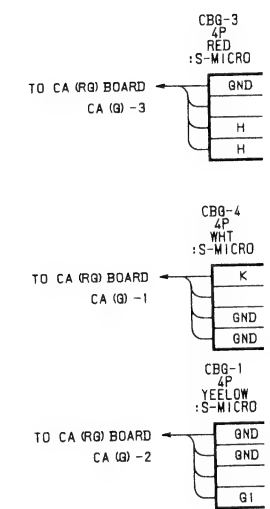


IN1	IN2	OUT1	OUT2	Mode
H	H	L	L	Brake
H	L	H	L	Forward (contraction)
L	H	L	H	Reverse (expansion)
L	L	HIGH IMPE		Stop

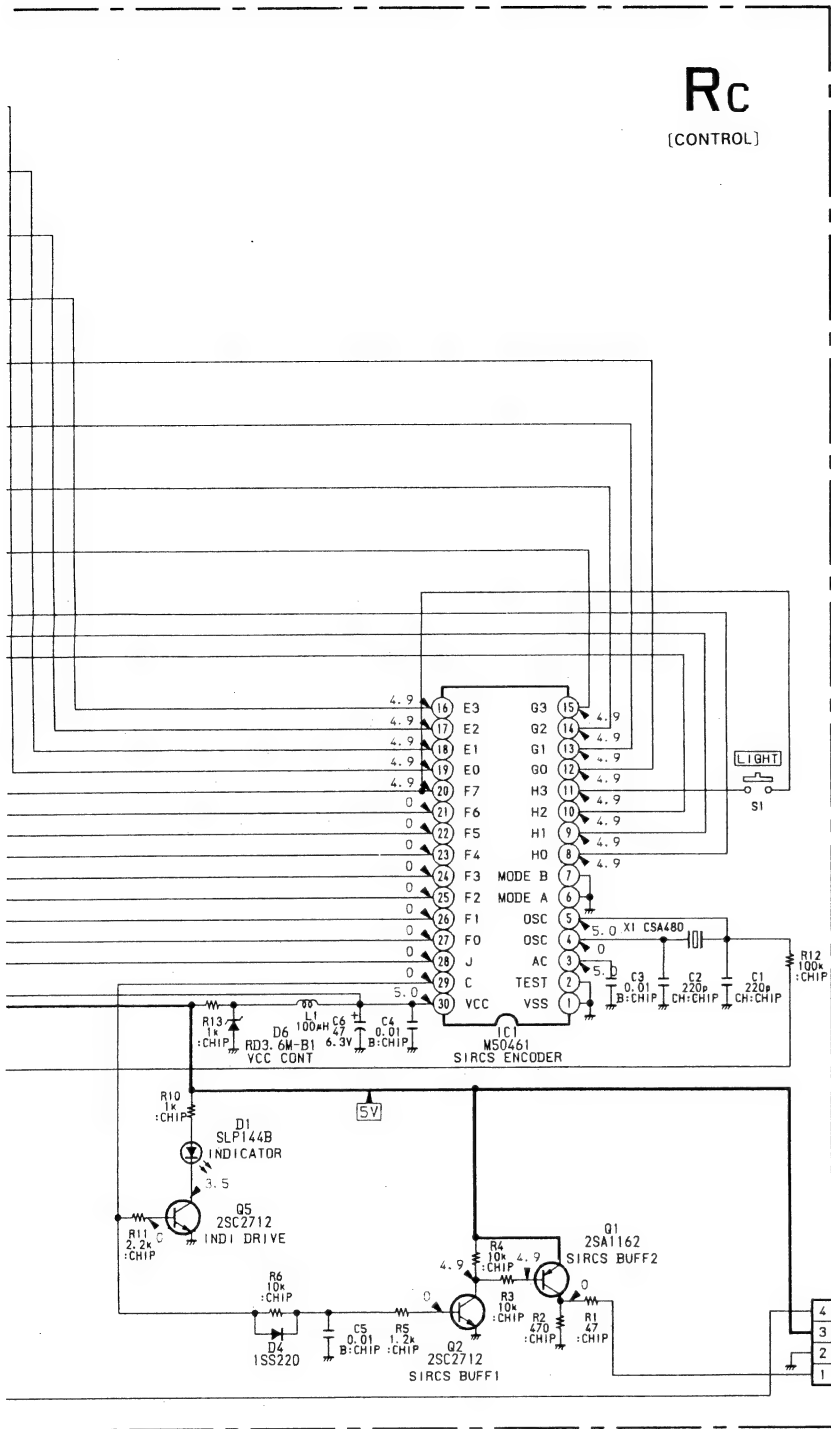
CONT. LSW : CONTRACTION LSW
EXP. LSW : EXPANSION LSW



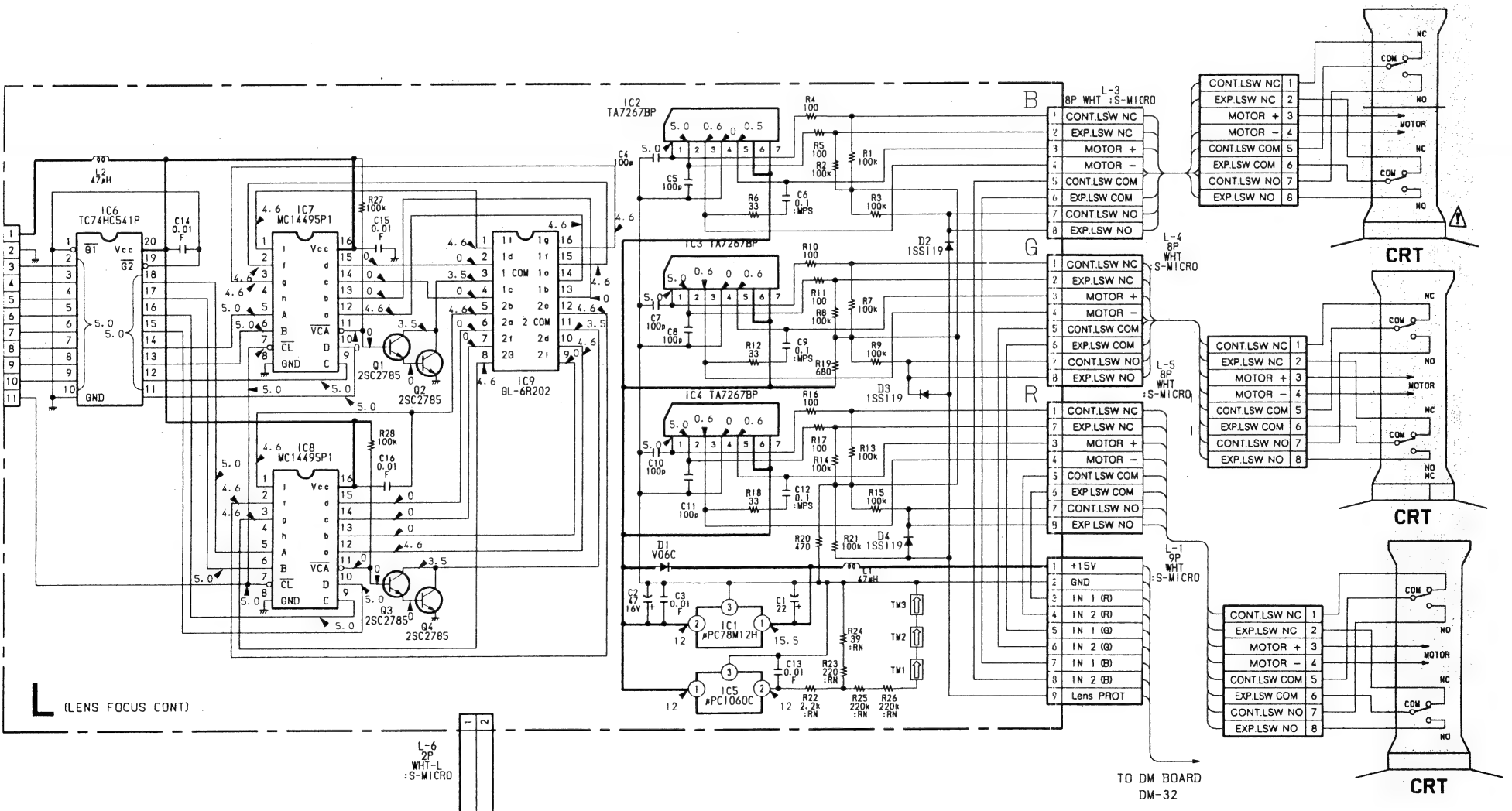
	IC1	μ PC78M12H	+ 12V REG
	2	TA7267BP	MOTOR DRIVE
	3	TA7267BP	MOTOR DRIVE
	4	TA7267BP	MOTOR DRIVE
	5	μ PC1060C	CONSTANT VOLTAGE
	6	TC74HC541P	DECODER
	7	MC14495P1	DECODER
	8	MC14495P1	DECODER
	9	GL-6R202	DISPLAY
	Q1	2SC2785	BUFFER
	2	2SC2785	BUFFER
	3	2SC2785	BUFFER
	4	2SC2785	BUFFER
	D1	V06C	PROTECT
	2	1SS119	SWITCH
	3	1SS119	SWITCH
	4	1SS119	SWITCH



CONT. LSW : CONTRACTION LSW
EXP. LSW : EXPANSION LSW

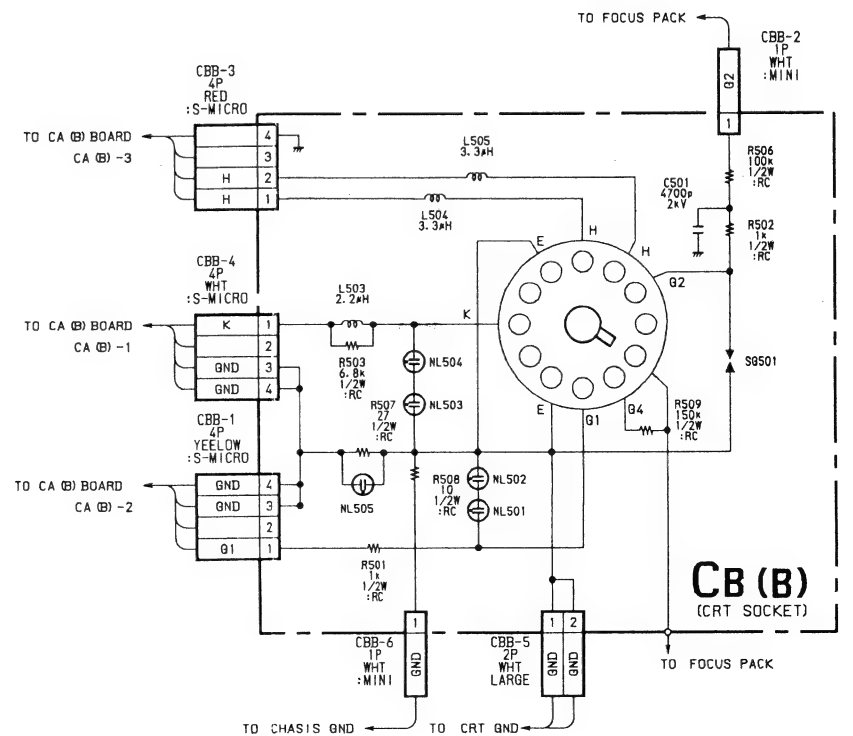
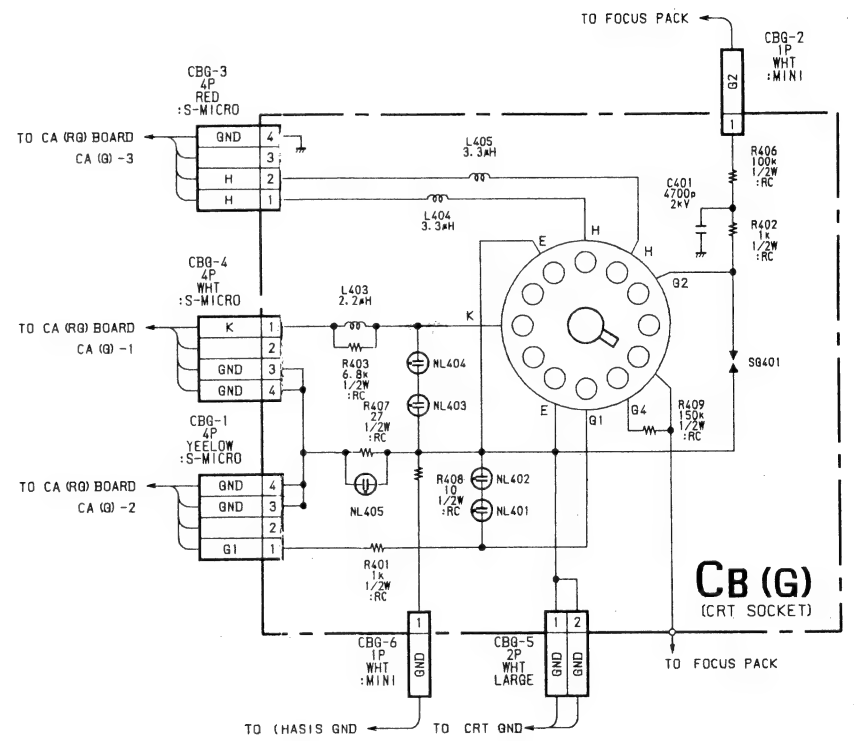
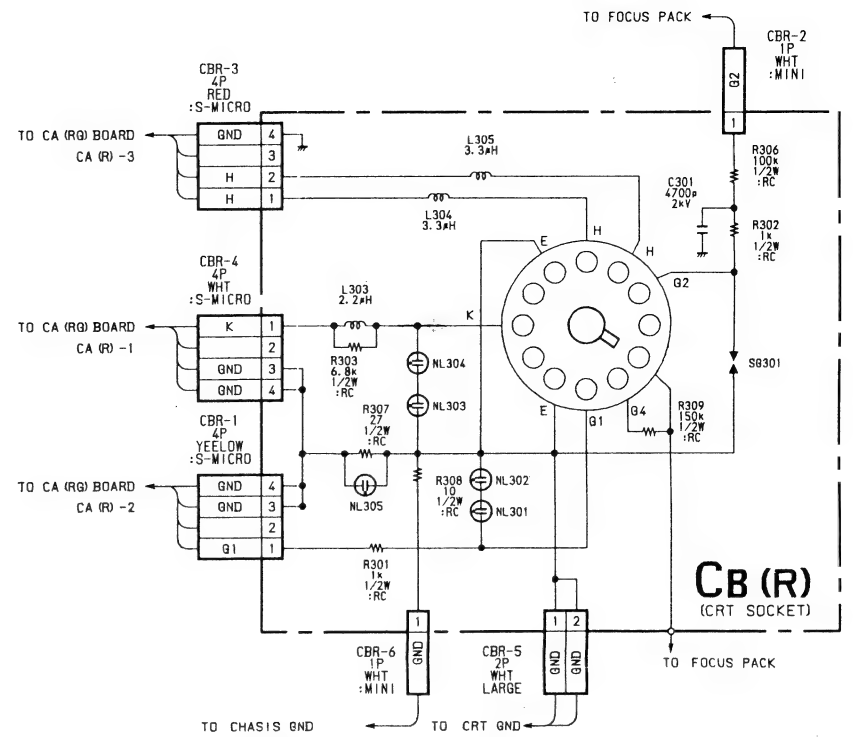


IC1	μ PC78M12H	+12V REG
2	TA7267BP	MOTOR DRIVE
3	TA7267BP	MOTOR DRIVE
4	TA7267BP	MOTOR DRIVE
5	μ PC1060C	CONSTANT VOLTAGE
6	TC74HC541P	DECODER
7	MC14495P1	DECODER
8	MC14495P1	DECODER
9	GL-6R202	DISPLAY
Q1	2SC2785	BUFFER
2	2SC2785	BUFFER
3	2SC2785	BUFFER
4	2SC2785	BUFFER
D1	V06C	PROTECT
2	1SS119	SWITCH
3	1SS119	SWITCH
4	1SS119	SWITCH

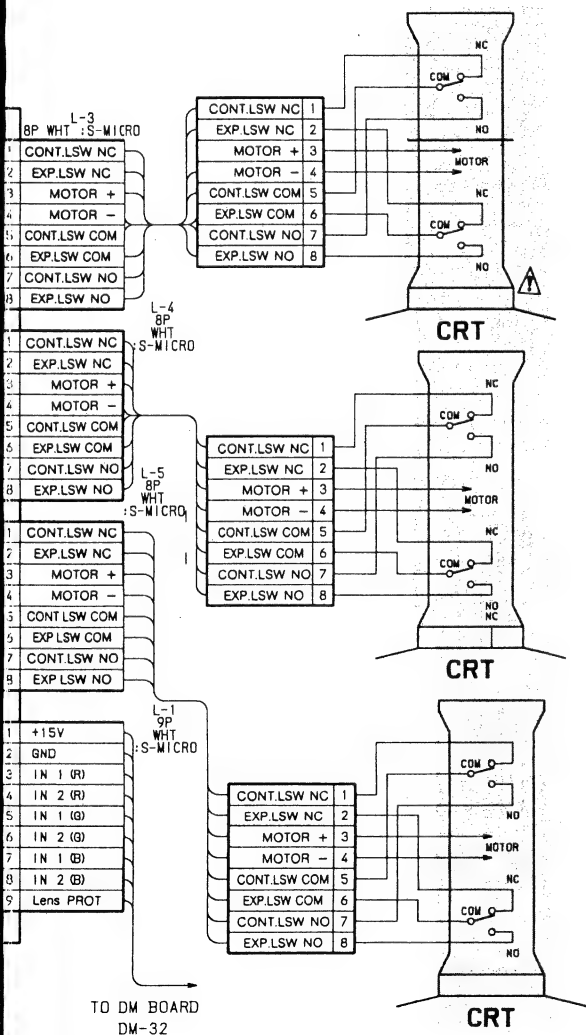


N1	IN2	OUT1	OUT2	Mode
H	H	L	L	Brake
H	L	H	L	Forward (contraction)
L	H	L	H	Reverse (expansion)
L	L	HIGH IMPE		Stop

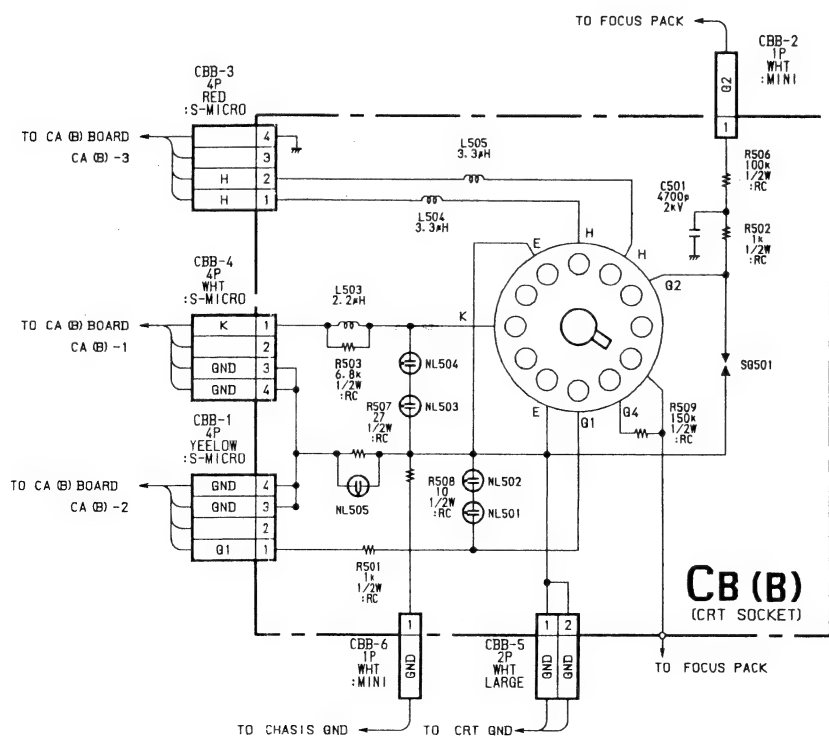
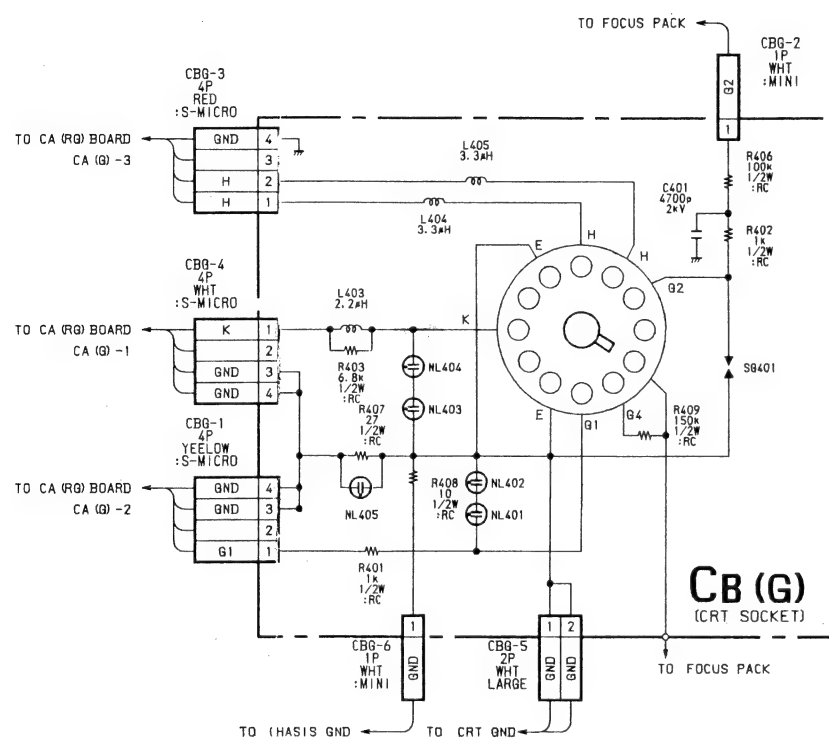
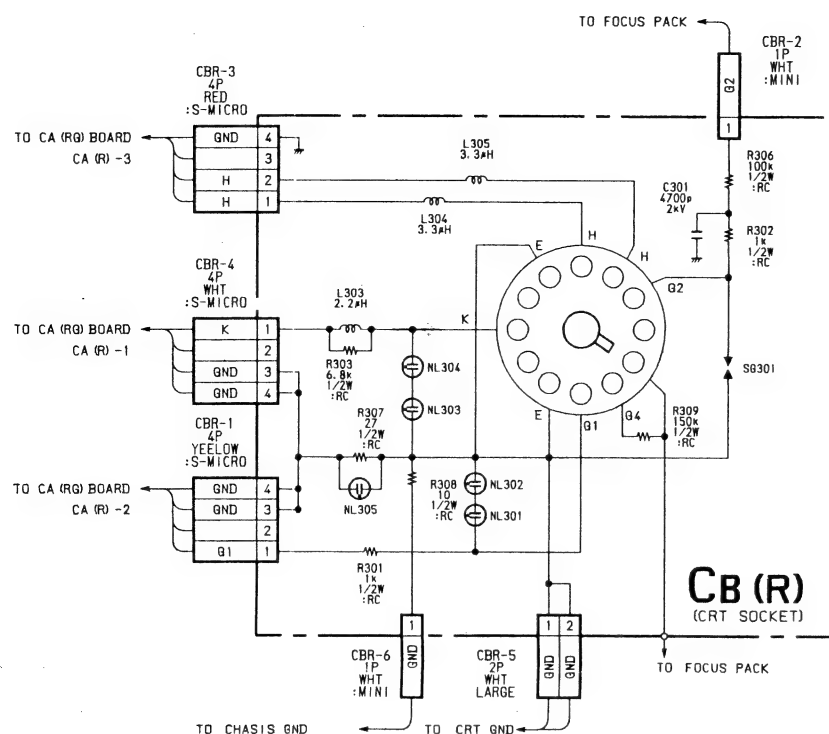
CONT. LSW : CONTRACTION LSW
EXP. LSW : EXPANSION LSW



IC1	μ PC78M12H	+12V REG
2	TA7267BP	MOTOR DRIVE
3	TA7267BP	MOTOR DRIVE
4	TA7267BP	MOTOR DRIVE
5	μ PC1060C	CONSTANT VOLTAGE
6	TC74HC541P	DECODER
7	MC14495P1	DECODER
8	MC14495P1	DECODER
9	GL-6R202	DISPLAY
Q1	2SC2785	BUFFER
2	2SC2785	BUFFER
3	2SC2785	BUFFER
4	2SC2785	BUFFER
D1	V06C	PROTECT
2	1SS119	SWITCH
3	1SS119	SWITCH
4	1SS119	SWITCH

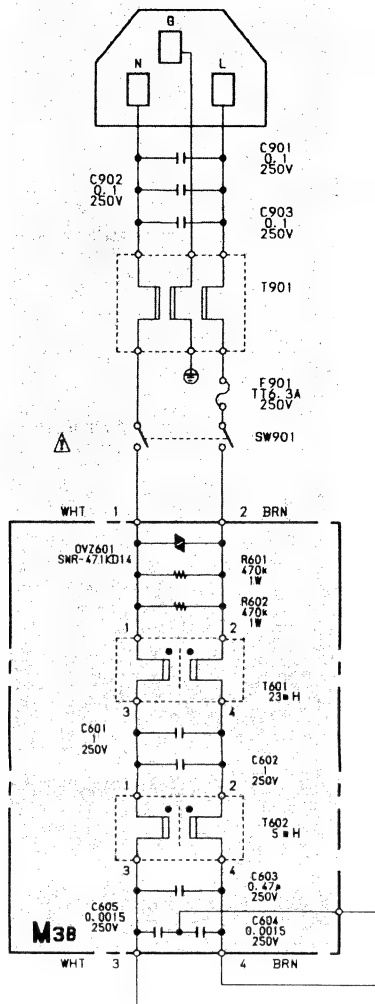


CONT. LSW : CONTRACTION LSW
EXP. LSW : EXPANSION LSW



A
B
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O
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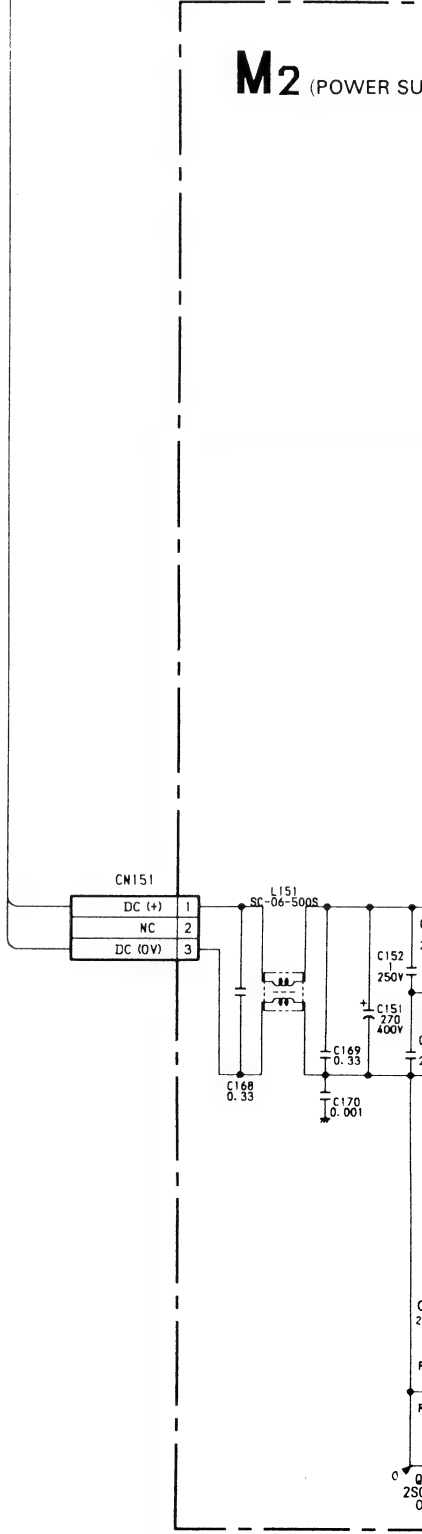
IC201	μ PC358	CMP
202	TL431C	2.5V REF VOLT
203	μ PC358C	AMP
204	TL431C	5.0V REF VOLT
Q101	2SK827	CONV
102	2SK827	CONV
103	2SK827	CONV
104	2SK827	CONV
105	2SB733	SPEED UP
106	2SB733	SPEED UP
201	2SC3042	210V REG
202	2SA1156	210V REG
203	2SC2752	210V REG
204	2SA1175	0V
205	2SA1175	0V
206	2SA1175	0V
207	2SA1175	0V
208	2SK422	DRIVE
209	2SK422	DRIVE
M1		
D101	S15VB60	AC RECT
102	11EQS04	RECT
103	11EQS04	RECT
201	ERC33-06	210V RECT
202	ERC33-06	210V RECT
203	ERC33-06	210V RECT
204	ERC33-06	210V RECT
205	ESAD39-06C	100V RECT
206	ESAD39-06N	100V RECT
207	U05G	CLAMP
208	U05G	CLAMP
209	RD5.6ESB2	CORRECT
210	1SS119	DC SHIFT
211	1SS119	DC SHIFT
213	RD39ESB	CLAMP
214	RD39ESB	CLAMP
215	1SS119	DC SHIFT
216	1SS119	DC SHIFT
218	1SS119	PROT
219	1SS119	PROT
220	1SS119	PROT

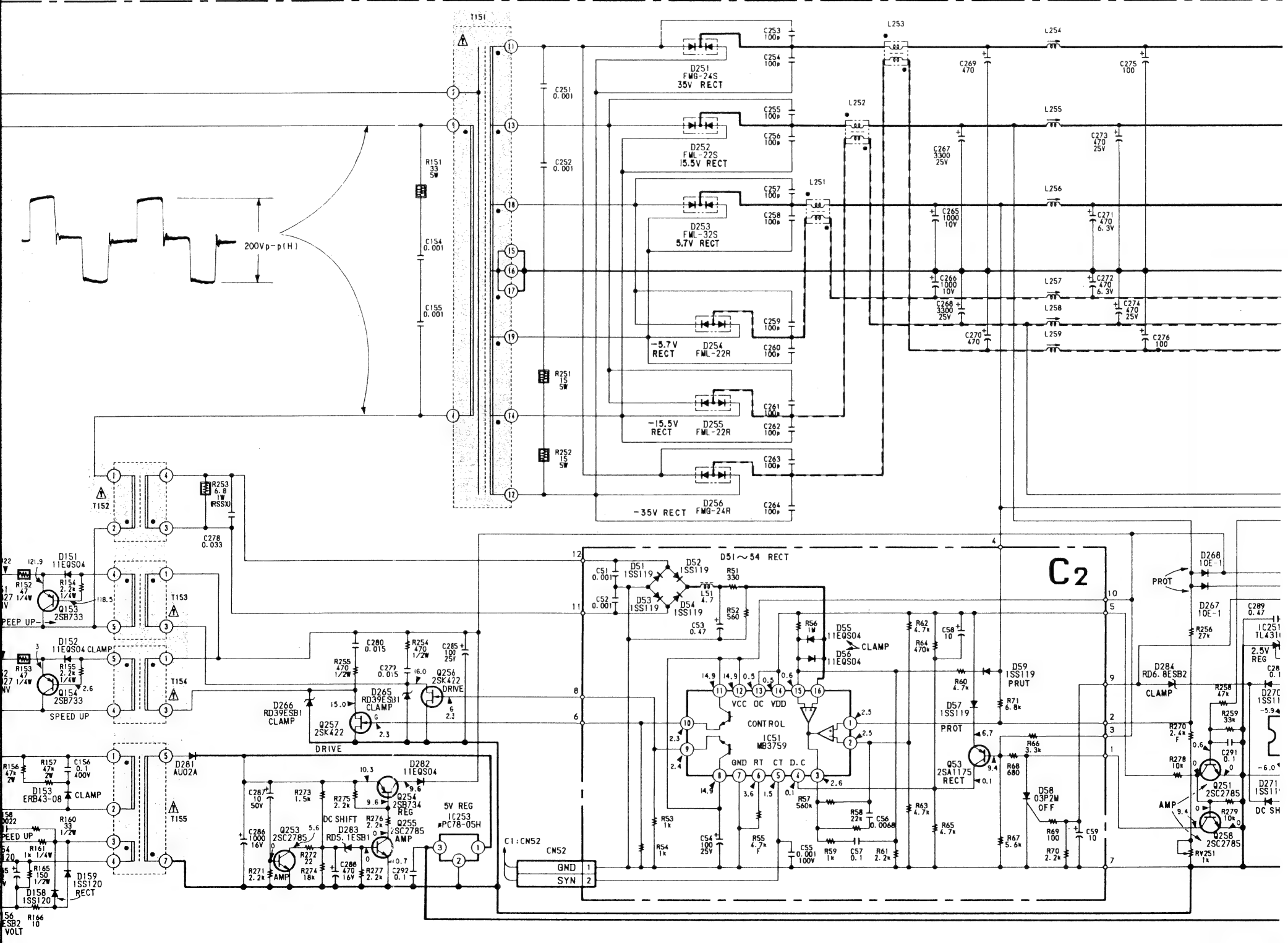


IC051	MB3759	CONTROL
Q053	2SA1175	AMP
D051	11EQS04	RECT
052	11EQS04	RECT
053	11EQS04	RECT
054	11EQS04	RECT
055	11EQS04	CLAMP
056	11EQS04	CLAMP
057	1SS119	PROT
058	03P2M	OFF
059	1SS119	PROT

IC051	MB3759	CONTROL
Q053	2SA1175	AMP
D051	11EQS04	RECT
052	11EQS04	RECT
053	11EQS04	RECT
054	11EQS04	RECT
055	11EQS04	CLAMP
056	11EQS04	CLAMP
057	1SS119	PROT
058	03P2M	OFF
059	1SS119	PROT

IC251	TL431C	2.5V REF
252	μ PC358C	AMP
253	μ PC78-05H	5V REG
Q151	2SK827	CONV
152	2SK827	CONV
153	2SB733	SPEED UP
154	2SB733	SPEED UP
155	2SC3150	CONV
156	2SC2785	OC
251	2SC2785	AMP
252	2SD882	REG
253	2SC2785	AMP
254	2SB734	REG
255	2SC2785	AMP
256	2SK422	DRIVE
257	2SK422	DRIVE
258	2SC2785	AMP
259	2SC2785	AMP
260	2SC2785	AMP
D151	11EQS04	CLAMP
152	11EQS04	CLAMP
153	ERB43-08	CLAMP
154	1SS120	PROT
155	1SS120	PROT
156	RD5.6ESB2	REF VOLT
158	1SS120	RECT
159	1SS120	RECT
251	FMG-24S	35V RECT
252	FML-22S	15.5V RECT
253	FML-32S	5.7V RECT
254	FML-22R	- 5.7V RECT
255	FML-22R	- 15.5V RECT
256	FMG-24R	- 35V RECT
265	RD39ESB	CLAMP
266	RD39ESB	CLAMP
267	10E-1	PROT
268	10E-1	PROT
270	1SS119	DC SHIFT
271	1SS119	DC SHIFT
272	1SS119	PROT
273	1SS119	PROT
274	1SS119	PROT
275	1SS119	PROT
276	RD5.6ESB2	0V
277	RD15ESB2	0V
278	RD18ESB1	0V
279	RD6.8ESB2	0V
280	RD12ESB2	REF VOLT
281	AU02A	RECT
282	11EQS04	PROT
283	RD5.1ESB1	DC SHIFT
284	RD6.8ESB2	CLAMP
285	1SS119	PROT
286	1SS119	PROT





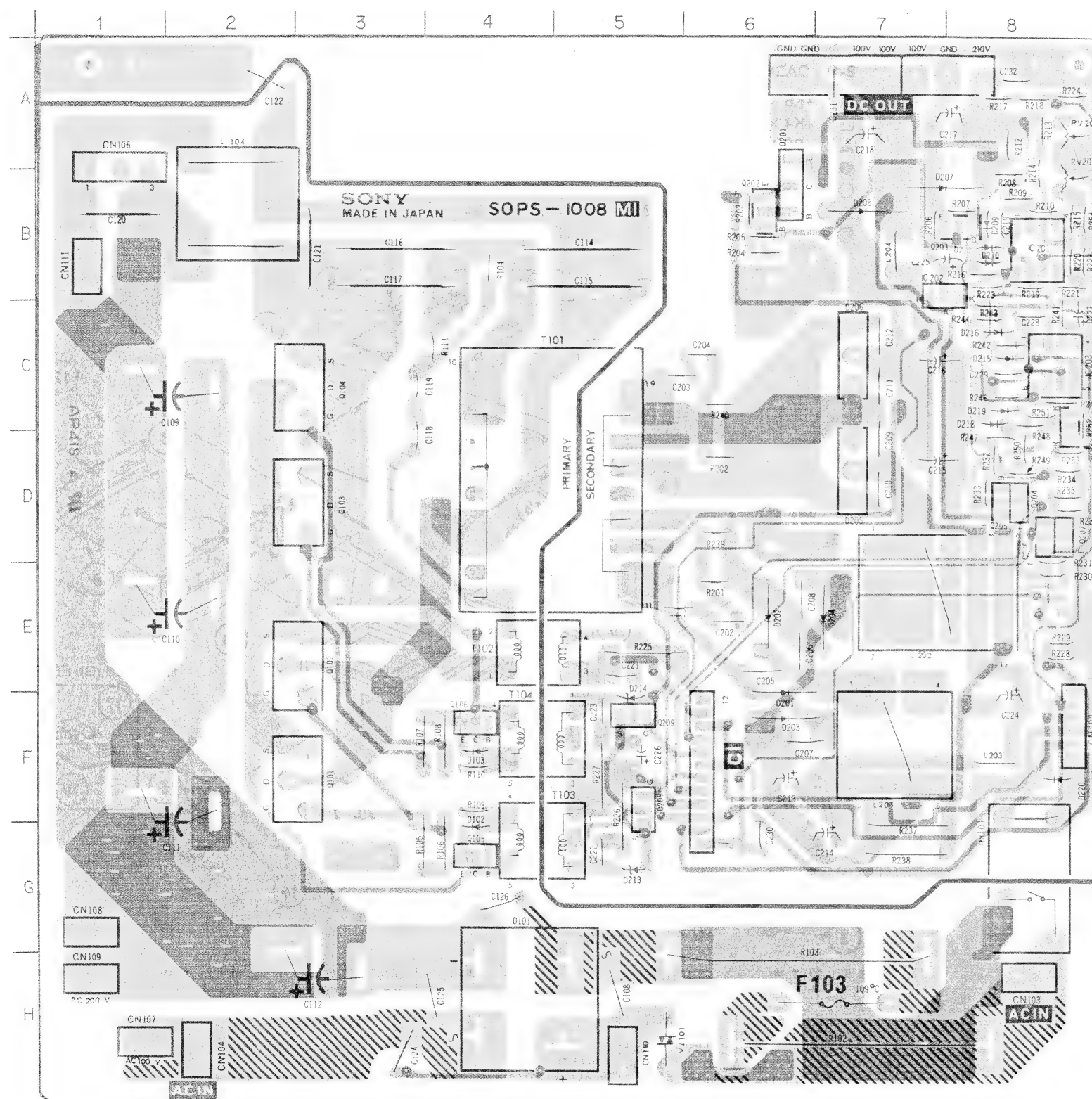
M1

[POWER SUPPLY]

M2

[POWER SUPPLY]

- M1 Board -



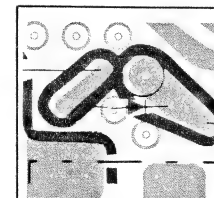
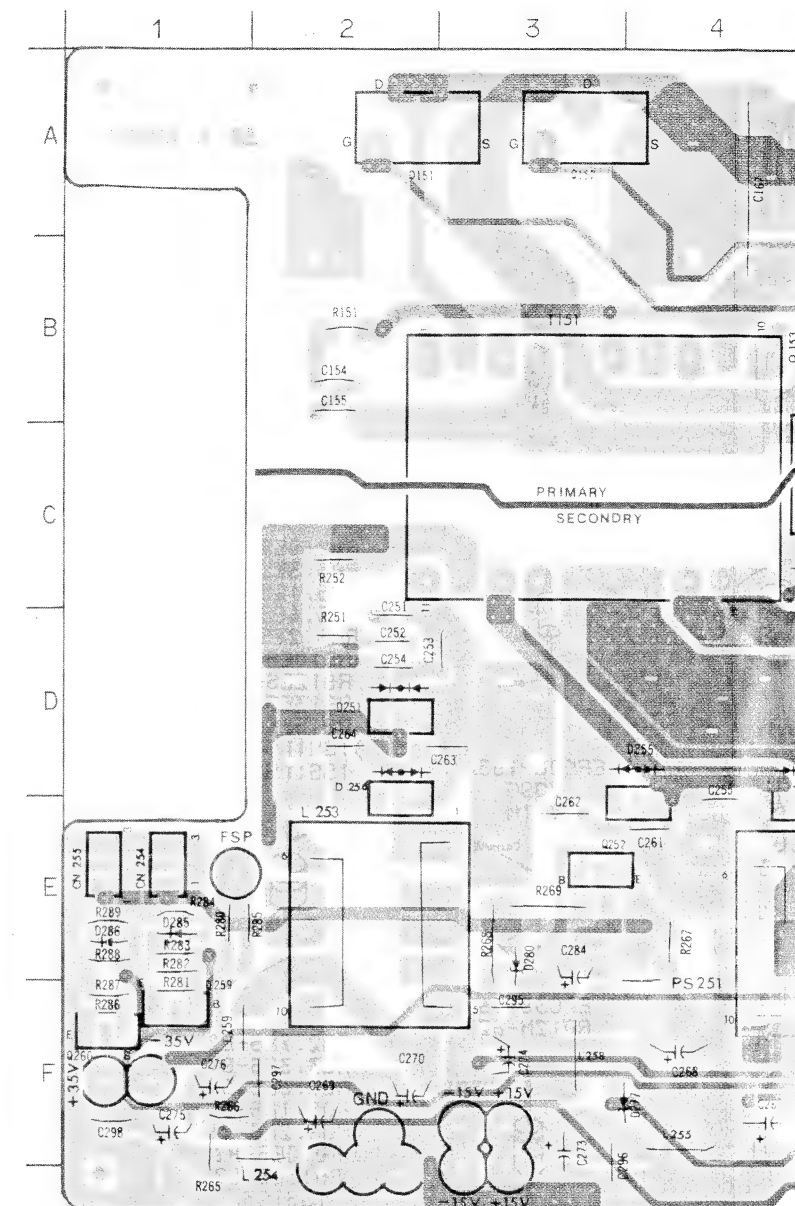
M1 BOARD

IC	
IC201	B-8
IC202	B-7
IC203	C-8
IC204	C-8

TRANSISTOR	
Q101	F-3
Q102	E-3
Q103	D-3
Q104	C-3
Q105	G-4
Q106	F-4
Q201	B-6
Q202	B-6
Q203	B-8
Q204	D-8
Q205	D-8
Q206	D-8
Q207	D-8
Q208	F-5
Q209	F-5

DIODE	
D101	H-4
D102	G-4
D103	F-4
D201	F-6
D202	E-6
D203	F-6
D204	E-7
D205	D-7
D206	C-7
D207	B-7
D208	B-7
D209	B-8
D210	B-8
D211	B-8
D213	G-5
D214	F-5
D215	C-8
D216	C-8
D218	C-8
D219	C-8
D220	F-8

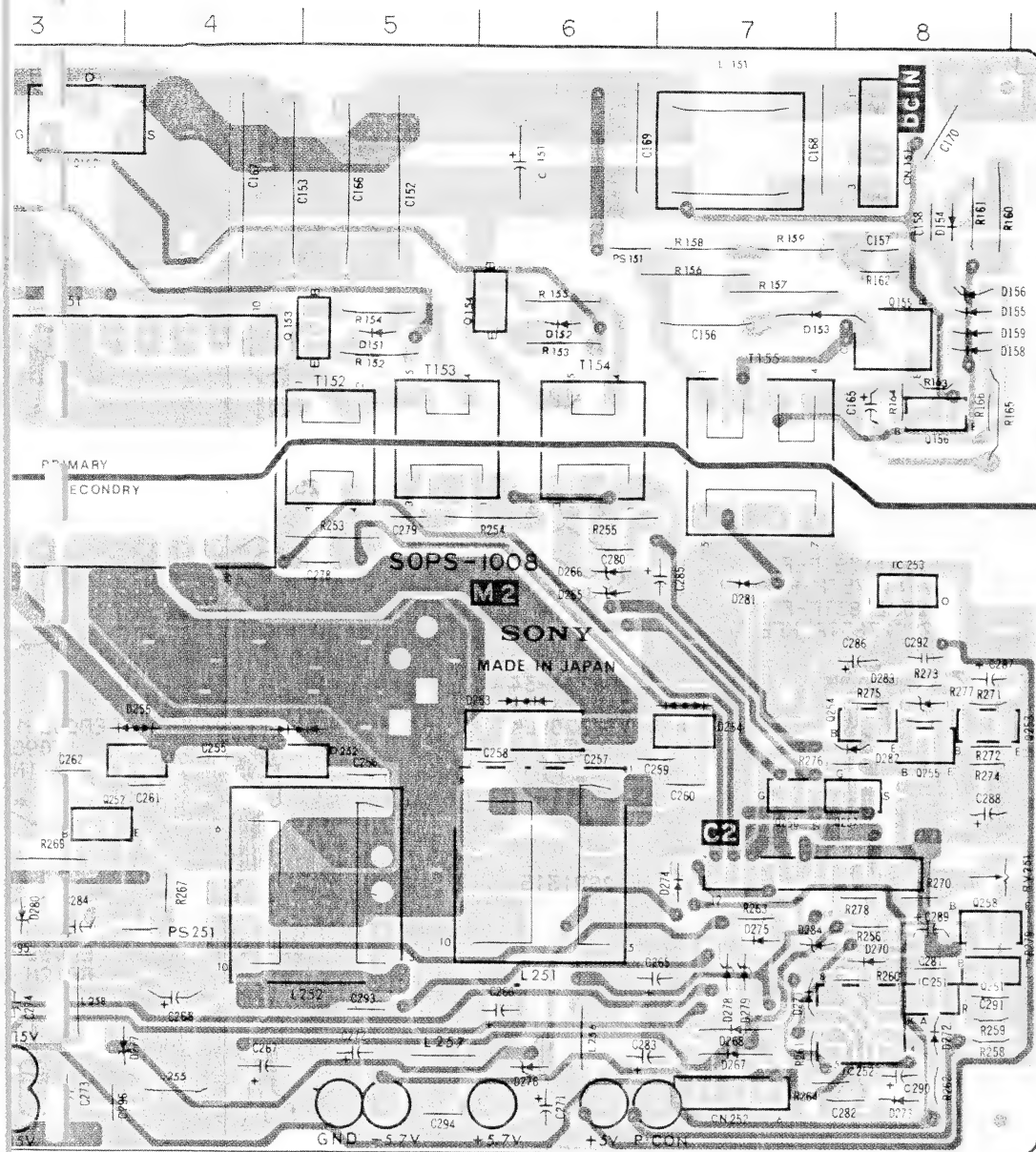
- M2 Board -


NOTE:

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

M2 BOARD

IC	
IC251	F-8
IC252	F-8
IC253	D-8
TRANSISTOR	
Q151	A-2
Q152	A-3
Q153	B-5
Q154	B-6
Q155	B-8
Q156	C-8
Q251	F-8
Q252	E-3
Q253	D-8
Q254	D-8
Q255	D-8
Q256	E-7
Q257	E-8
Q258	E-8
Q259	F-1
Q260	F-1
DIODE	
D151	B-5
D152	B-6
D153	B-7
D154	A-8
D155	B-8
D156	B-8
D158	B-8
D159	B-8
D251	D-2
D252	E-4
D253	D-6
D254	D-7
D255	E-4
D256	E-2
D265	D-6
D266	C-6
D267	F-7
D268	F-7
D270	F-8
D271	F-7
D272	F-8
D273	F-8
D274	E-7
D275	F-7
D276	F-6
D277	F-4
D278	F-7
D279	F-7
D280	E-3
D281	D-7
D282	D-8
D283	D-8
D284	F-7
D285	E-1
D286	E-1
VARIABLE RESISTOR	
RV251	E-8



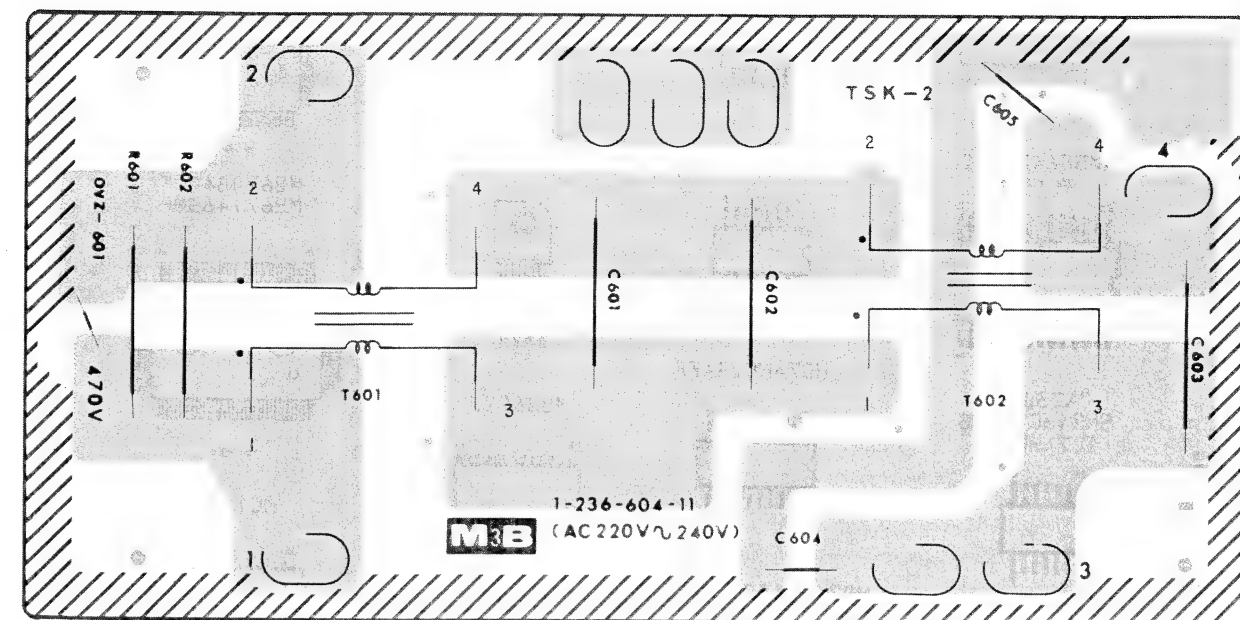
M3B

[LINE FILTER]

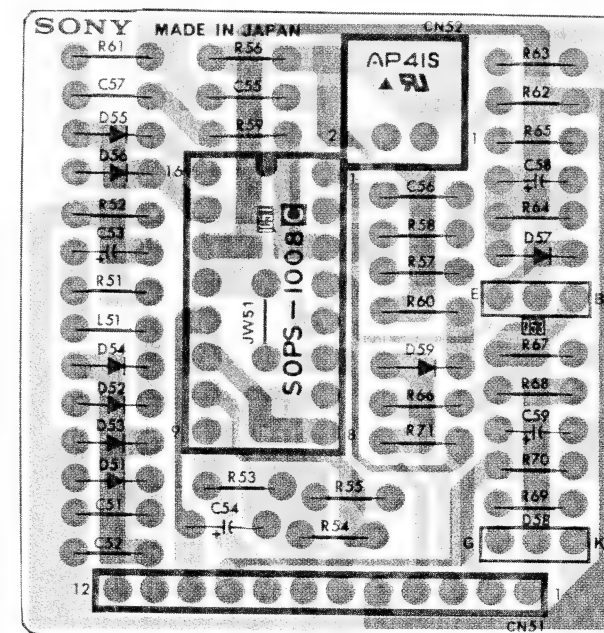
C1

C2

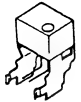
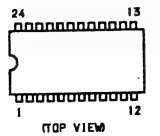
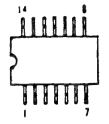
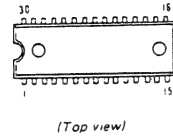
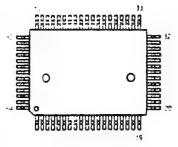
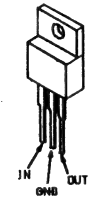
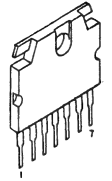
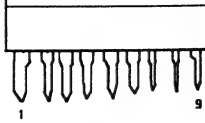
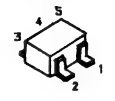

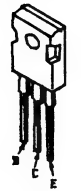
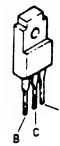
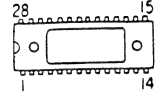
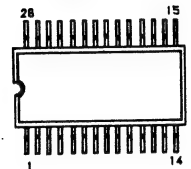
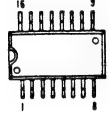
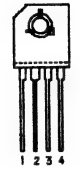
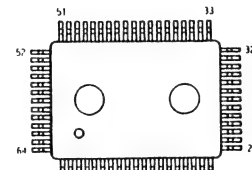
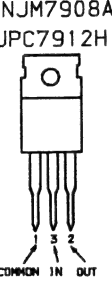
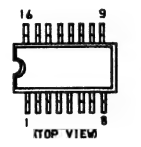
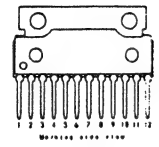
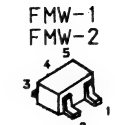

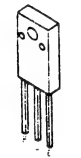

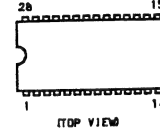
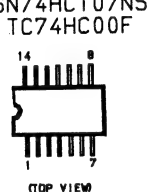
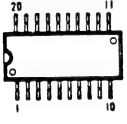
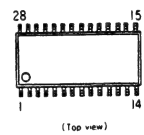
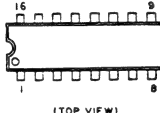
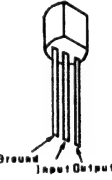
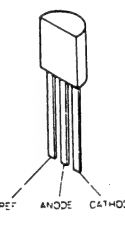
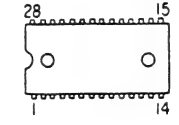


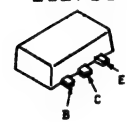
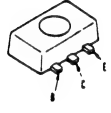
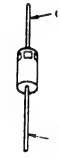
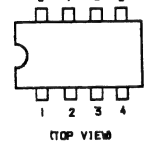
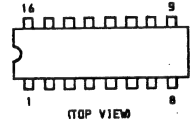
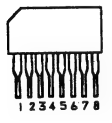
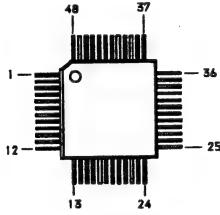
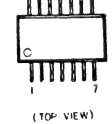
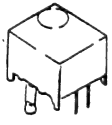
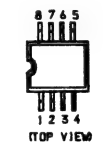
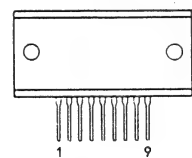


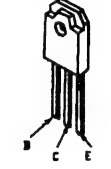

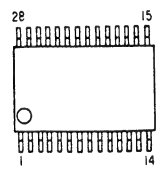
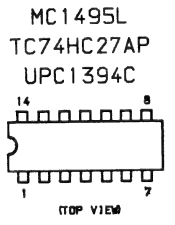
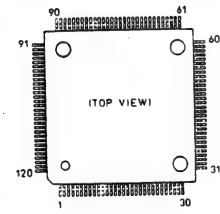
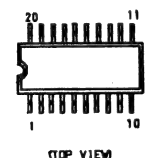
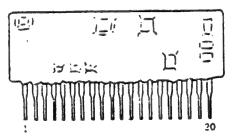
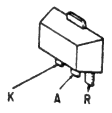
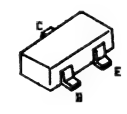
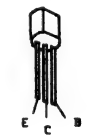
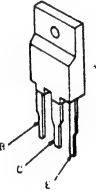
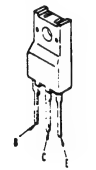

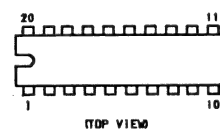
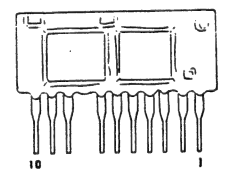

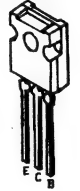

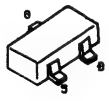
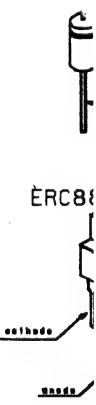
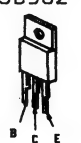

- M3B Board -



- C1,C2 Board -



7-5. SEMICONDUCTORS

BX1398 	CXK5814P-45L  (TOP VIEW)	H074HC04FP 	M50461-PJT  (Top view)	MB654842UPF  TOP VIEW	NJM7808FA  IN OUT OHM	TA7267BP 	UPC1406HA 	FMS-2 FMW-8 	2SA1381 2SA1407 2SA649A 2SC2688-LK 2SD669A  LETTER SIDE	2SC3998 	2SK75 	
CXA1158P 	CXK5864BM-12L  (TOP VIEW)	H074HC138FP 	MSF78M12 RC7812FA 	MB670840PF MB671469PF  TOP VIEW	NJM7908A UPC7912H  COMMON IN OUT	TC74HC123F  (TOP VIEW)	UPC1498H  MULTIPLE ALIAS VIEW	FMW-1 FMW-2 	2SA1428Y 2SC3668-Y  E C	2SC4054N 	2SJ1 2SK8 2SK9 	
CXA1216P  (TOP VIEW)	CX23065A SN74HC107NS TC74HC00F  (TOP VIEW)	H074HC244FP 	MB86023  (Top view)	MC14495  (TOP VIEW)	NJM79L12A  Ground Input Output	TL431CLP  REF ANODE CATHODE	UPD28C64C-20 	IMX-2 	2SA1175TP-F 2SA1175TP-HFE 2SC2785TP-F 2SC2785TP-HFE  LETTER SIDE	2SB798 	2SD1005 	ERA22 
CX-7916 H064180R1PB RC4558P LM6364N TL082CP MBM27C521-25 UPC393C UPC814G21 UPC814G21 UPC1060C  (TOP VIEW)	H010124 H014052BP H014538BP H014538BFP MC34051P MC14572UBCP MC74HC4558N SN745124N TC4040BP YC4053BP TC74HC157AP  (TOP VIEW)	LA7016 	MB8855-1293N 	MC74HC14F  (TOP VIEW)	SBX-1438-59 	UPC393G2 UPC4558G2  (TOP VIEW)	VPH05 	2SA1175TP-F 2SA1175TP-HFE 2SC2785TP-F 2SC2785TP-HFE  LETTER SIDE	2SB734-34 2SB774-34 2SC3209LK 	2SD1403 	ERC06 V06 V10 	
CXK3864-040M CXK3864-041M CXK3864-042M  TOP VIEW	MC1495L TC74HC27AP UPC1394C  (TOP VIEW)		MB605195PF  (TOP VIEW)	MC74HC514F  (TOP VIEW)	SBX-4011-01 	UPC1093T 	DTA124EK DTC124EK DTC144EK 2SA1162-YG 2SA1462 2SC1612 2SC2712 2SC2859-Y 2SC3545 	2SA1208 2SD2918 2SD789-4 	2SB1315 	2SD1977 	ERC R01 	
				MC74HC514N  (TOP VIEW)	SYN-8C02 		DTA124ES DTC114ES DTC124ES DTC144ES 	2SA1358-Y 2SC3421-Y 	2SC2525 	2SK160K6 	ERC8 	
								2SC3675 2SD982 		2SK523-K1 2SK523-M1 		

SECTION 8 EXPLODED VIEWS

NOTE:

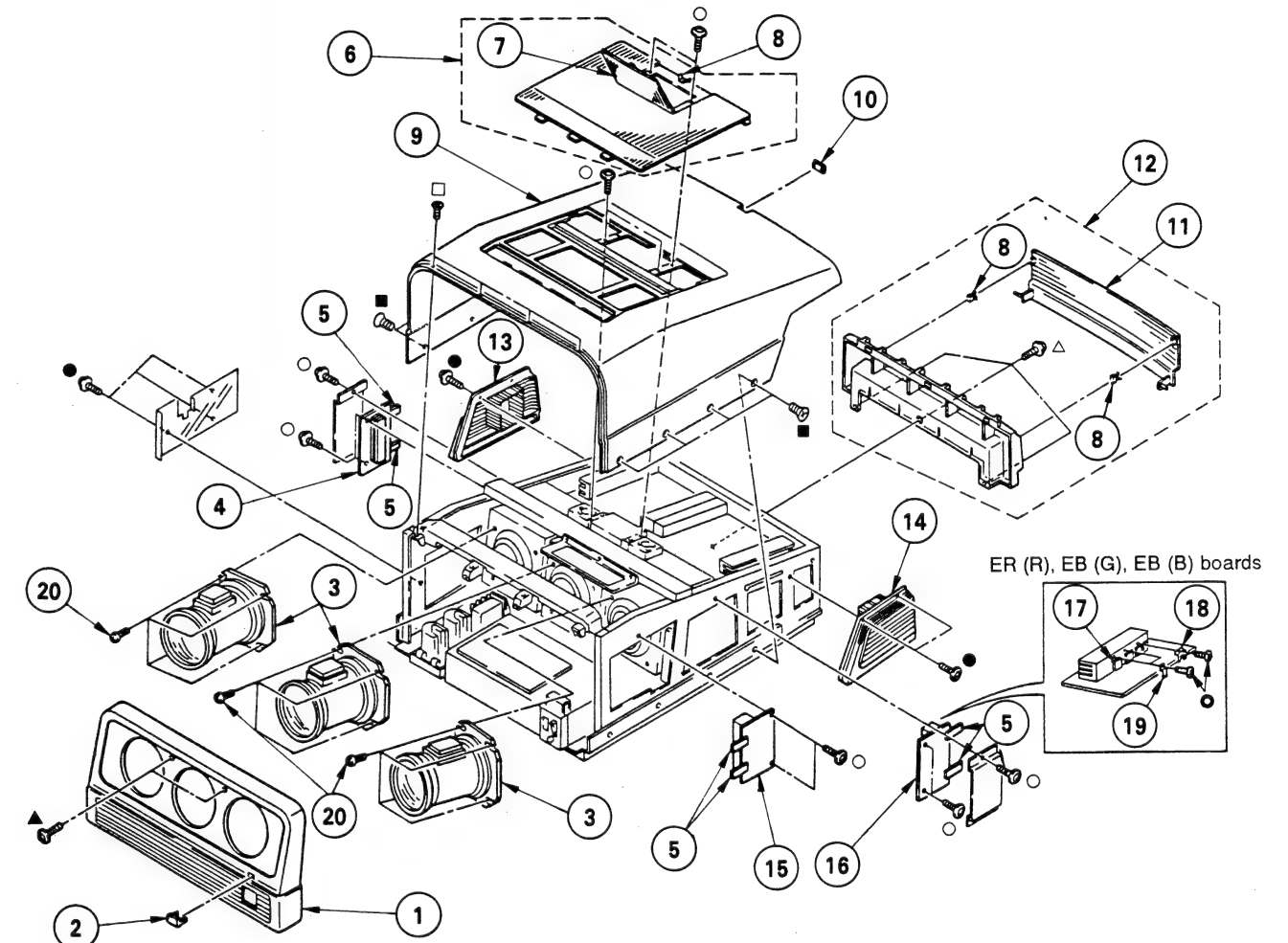
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

8-1. CASE, LENS

- : +K6 × 12 7-682-288-09
- : +K4 × 8 7-682-261-09
- ▲ : +PSW4 × 14 7-682-663-09
- : IT TAPPING SCREW +M4 × 16 7-685-663-79
- : TERMINAL SCREW +M4 × 8 7-682-561-04
- △ : TERMINAL SCREW +M3 × 10 7-682-549-04
- ◎ : +P3 × 8 7-682-548-04

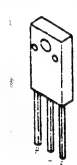


REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	X-4395-522-1	PANEL ASSY, FRONT		11	4-396-234-01	DOOR, CONNECTOR PANEL	
2	4-395-534-01	FILTER		12	X-4395-525-1	LOUVER (C) ASSY	8
3	4-396-248-01	LENS (HD-240FS)		13	4-396-231-01	LOUVER (L)	
4	*A-1341-222-A	EB (B) BOARD, COMPLETE		14	4-396-232-01	LOUVER (R)	
5	*4-313-732-00	CLIP, HINGE, CIRCUIT BOARD		15	*A-1341-220-A	EB (R) BOARD, COMPLETE	
6	X-4395-523-1	PLATE ASSY, TOP	7,8	16	*A-1341-221-A	EB (G) BOARD, COMPLETE	
7	4-395-596-01	DOOR, CONTROL PANEL		17	4-384-424-01	SHEET, SHIELD (B)	
8	4-386-710-01	CATCHER, PUSH		18	*4-384-422-01	TR RETAINER (C)	
9	X-4395-524-1	HOOD ASSY	10	19	*4-396-261-01	TR HOLDER (E)	
10	4-396-224-01	PLATE, INDICATE		20	2-350-305-11	SCREW	

25C3998



5C4054N



5D1005



25D1403



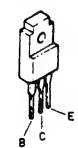
25D1977



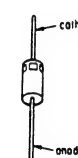
25K160K6


25K523-K1
25K523-M1


25K755


25J143
25K817
25K929


ERA22-06


ERC06-15SA
V09G
V11N

ERC38-06
R012M-B2

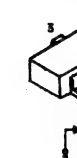
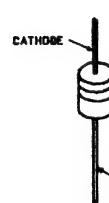

ERC88-099



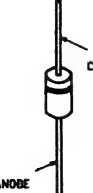
ER029-08J



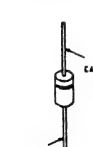
MA152WK


R02.0ES-B2
R03.3ES-B2
R05.1ES-B2
R05.6ES-B2
R06.2ES-B2
R010ES-B2
R012ES-B2
R013ES-B2
R015ES-B2
1SS119T0
1SS119TG

R02.7ES-B2
R03.3ES-B1
R03.6ES-B1
R05.1ES-B2
R06.2ES-B1
R010ES-B2
R013ES-B2
1SS193

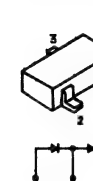

RU-1C



1SS83



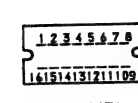
1SS226



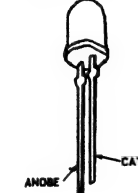
1SS836


GL-3EG8
SLP281C-50
TLR123


GL-6R202



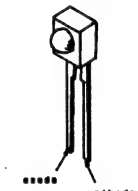
SE303AY



SLP144B

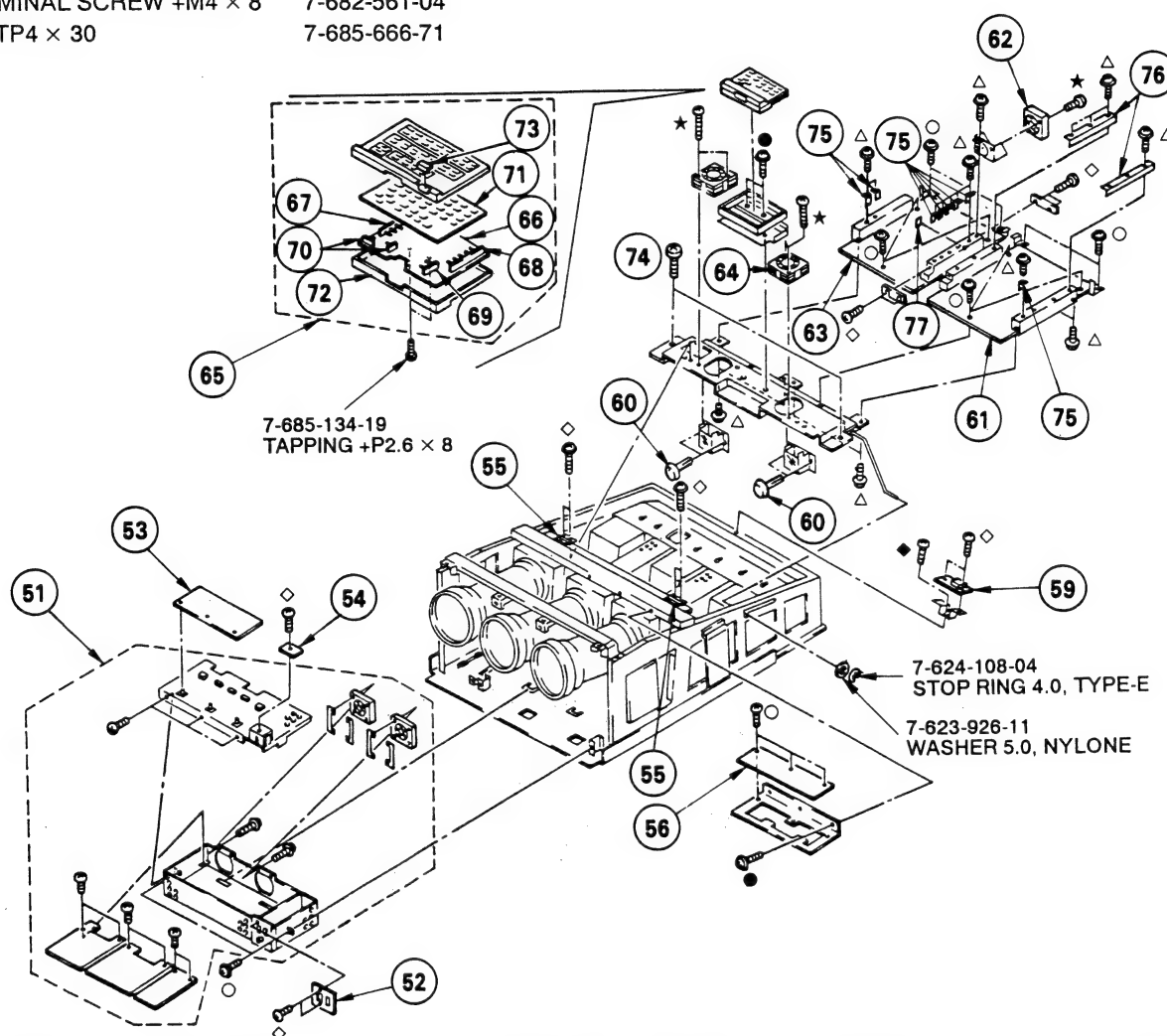


TLR214



8-2. CHASSIS 1

- ◆ : +BVTP3 × 12 7-685-646-79
- ◇ : +BVTP4 × 10 7-685-660-79
- △ : TERMINAL SCREW +M4 × 16 7-685-599-04
- : IT TAPPING SCREW +M4 × 16 7-685-663-79
- : TERMINAL SCREW +M4 × 8 7-682-561-04
- ★ : +BVTP4 × 30 7-685-666-71



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	A-1-413-484-12	REGULATOR, SWITCHING (SDPS1008D)		64	1-541-703-11	FAN, DC	
52	4-396-220-01	PLATE, POWER		65	A-1499-939-A	PANEL ASSY, CONTROL	66-73
53	*A-1195-036-A	PA BOARD, COMPLETE		66	*1-631-359-11	RC BOARD	
54	*1-629-817-11	NB BOARD		67	*1-631-356-11	RCA BOARD	
55	*3-658-816-00	HINGE, FRONT		68	*1-631-357-11	RCB BOARD	
56	*1-629-809-11	L BOARD		69	*1-631-358-11	RCC BOARD	
59	*1-629-816-11	NA BOARD		70	*1-631-493-11	RCD BOARD	
60	4-374-303-01	RIVET, NYLON		71	4-395-509-11	SHEET, RUBBER	
61	*A-1345-908-A	DC BOARD, COMPLETE		72	4-395-508-01	CASE, LOWER	
62	1-541-702-11	FAN, DC		73	4-395-501-01	KEY TOP	
63	*A-1345-907-A	E BOARD, COMPLETE		74	4-396-260-21	BOLT, SOCKET HEXAGON	
				75	*4-395-528-01	HOLDER (C), TR	
				76	*4-395-553-01	HOLDER (A), TR	
				77	*4-393-406-01	SHEET (R), RADIATION	

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

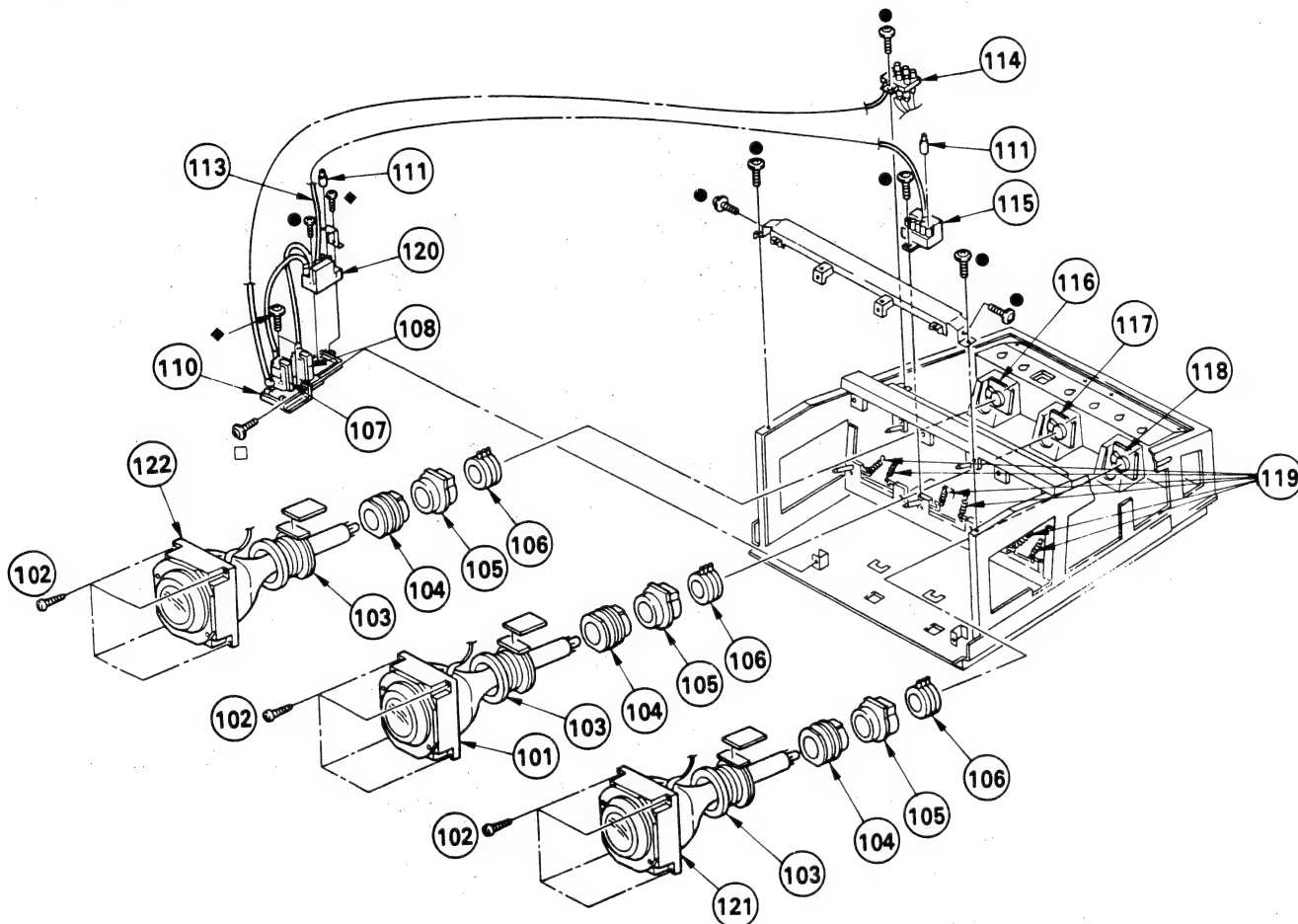
8-3. PICTURE TUBE

- : +K4 × 8
◆ : +BVTP3 × 12
● : IT TAPPING SCREW +M4 × 16

7-682-261-09

7-685-646-79

7-685-663-79



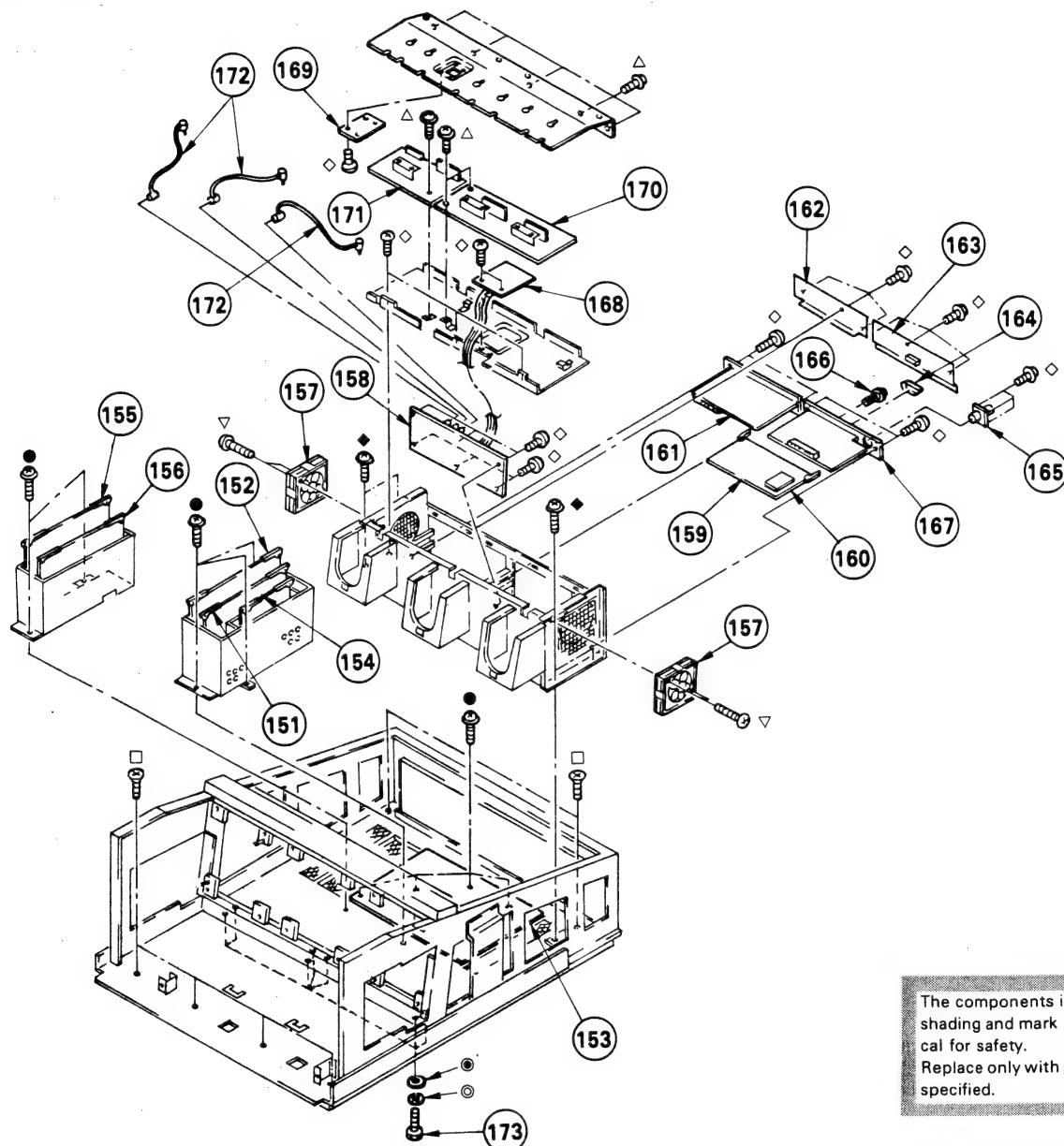
REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
101	▲ 8-736-321-05	PICTURE TUBE (09MH(G))		110	*1-629-815-11	PB BOARD	
102	2-350-305-11	SCREW		111	4-373-137-01	CAP (Z), RUBBER	
103	▲ 1-451-355-12	DEFLECTION YOKE (Y636PJ)		113	1-559-865-31	LEAD ASSY, HIGH-VOLTAGE	
104	▲ 1-452-487-31	NECK ASSY, PICTURE TUBE (NA363A)		114	▲ 1-238-755-11	RESISTOR ASSY, HIGH-VOLTAGE	
105	1-452-541-11	MAGNET ASSY, FOCUS		115	▲ 1-453-108-11	DC BLOCK, HIGH-VOLTAGE	
106	▲ 1-452-429-21	NECK ASSY, PICTURE TUBE (NA366)		116	*1-629-828-11	CBB BOARD	
107	▲ 1-439-466-11	TRANSFORMER ASSY, FLYBACK (NX-2500)		117	*1-629-827-11	CBG BOARD	
108	▲ 1-439-466-21	TRANSFORMER ASSY, FLYBACK (NX-2502)		118	*1-629-826-11	CBR BOARD	
				119	4-303-774-99	SPRING, GROUND	
				120	▲ 1-453-108-31	DC BLOCK, HIGH-VOLTAGE	
				121	▲ 8-736-323-05	PICTURE TUBE (09MH (R))	
				122	▲ 8-736-322-05	PICTURE TUBE (09MH (B))	

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

8-4. CHASSIS 2

- ◇ : +BVTP3 × 8 7-685-646-79
 ◆ : +BVTP4 × 10 7-685-660-79
 ▽ : TERMINAL SCREW +M4 × 30 7-685-660-71
 △ : TERMINAL SCREW +M3 × 10 7-682-549-04

- : IT TAPPING SCREW +M4 × 16 7-685-663-79
 □ : +K4 × 8 7-682-261-09
 ◎ : SW8 7-623-214-22
 ◎ : W8, MIDDLE 7-688-007-12



The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
151	*A-1345-875-A	DA BOARD, COMPLETE		163	*4-395-559-01	PLATE (B)	
152	*A-1345-906-A	DB BOARD, COMPLETE		164	*3-673-948-11	CAP, DUST	
153	*1-629-830-11	DM BOARD		165	1-575-092-11	CONNECTOR ASSY. MULTI 14P	
154	*A-1394-215-A	Y BOARD, COMPLETE		166	4-812-134-21	RIVET NYLON, 3.5	
155	A-1341-218-A	DD BOARD, COMPLETE		167	4-395-583-11	PANEL (B), CONNECTOR	
156	A-1341-219-A	DE BOARD, COMPLETE		168	*1-629-819-11	CF-1 BOARD	
157	1-541-703-11	FAN, DC		169	*1-629-820-11	CF-2 BOARD	
158	*1-629-818-11	BM BOARD		170	*A-1335-015-A	CA (RG) BOARD, COMPLETE	
159	*A-1135-587-A	BB BOARD, COMPLETE		171	*A-1335-014-A	CA (B) BOARD, COMPLETE	
160	*A-1135-628-A	BA BOARD, COMPLETE		172	*1-555-110-00	CABLE, P-P	
161	A-1390-051-A	QHD BOARD, COMPLETE		173	4-396-260-11	BOLT, SOCKET HEXAGON	
162	*4-395-558-01	PLATE (Z)					

SECTION 9 ELECTRICAL PARTS LIST

BM

BA

NOTE:

The components identified by shading and mark **Δ** are critical for safety.
Replace only with part number specified.

• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

• All resistors are in ohms
• F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS

COILS

• MF : μ F, PF : μ PF • MMH : mH, UH : μ H

• The components identified by **Δ** in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

• * : Selected to yield optimum performance.

• There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
	*1-629-818-11	BM BOARD *****		C016	1-126-233-11	ELECT 22MF	20% 50V
	*1-564-509-11	PLUG, CONNECTOR 6P		C017	1-126-101-11	ELECT 100MF	20% 16V
	*1-564-515-11	PLUG, CONNECTOR 12P		C018	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
	*1-568-979-11	CONNECTOR 30P		C019	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
	*1-568-981-11	CONNECTOR, MALE 64P		C020	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
	*1-568-985-11	CONNECTOR, FEMALE 64P		C021	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
		<CONNECTOR>		C022	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
BM1	*1-568-984-11	CONNECTOR, MALE 96P		C023	1-163-088-00	CERAMIC CHIP 5PF	0.25PF 50V
BM3	*1-568-982-11	CONNECTOR, FEMALE 96P		C024	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
RM4	*1-568-982-11	CONNECTOR, FEMALE 96P		C027	1-123-875-11	ELECT 10MF	20% 50V
		<JACK>		C030	1-163-213-00	CERAMIC CHIP 0.0022MF	10% 50V
J1	*1-526-575-00	SOCKET, PLUG 1P		C101	1-124-119-00	ELECT 330MF	20% 16V
J2	*1-526-575-00	SOCKET, PLUG 1P		C102	1-124-119-00	ELECT 330MF	20% 16V
J3	*1-526-575-00	SOCKET, PLUG 1P		C103	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
J4	*1-526-575-00	SOCKET, PLUG 1P		C104	1-163-033-00	CERAMIC CHIP 0.022MF	5% 50V
J5	*1-526-575-00	SOCKET, PLUG 1P		C105	1-136-153-00	FILM 0.01MF	5% 50V
J6	*1-526-575-00	SOCKET, PLUG 1P		C106	1-164-232-11	CERAMIC CHIP 0.01MF	5% 50V
		*****		C107	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
	*A-1135-628-A	BA BOARD, COMPLETE *****		C108	1-163-241-11	CERAMIC CHIP 39PF	5% 50V
	*1-568-984-11	CONNECTOR, MALE 96P		C109	1-163-099-00	CERAMIC CHIP 18PF	5% 50V
	4-309-378-00	WASHER		C110	1-163-099-00	CERAMIC CHIP 18PF	5% 50V
		<FILTER>		C111	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
BPF001	1-236-366-11	MODULE, TRAP		C112	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
BPF002	1-236-365-11	MODULE, TRAP		C113	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
BPF003	1-236-063-11	MODULE, B.P.F		C114	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
		<CAPACITOR>		C115	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C001	1-124-477-11	ELECT 47MF	20% 16V	C116	1-124-791-11	ELECT 1MF	20% 50V
C002	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C117	1-124-791-11	ELECT 1MF	20% 50V
C003	1-126-233-11	ELECT 22MF	20% 50V	C118	1-136-173-00	FILM 0.47MF	5% 50V
C004	1-126-233-11	ELECT 22MF	20% 50V	C119	1-136-161-00	FILM 0.047MF	5% 50V
C005	1-126-233-11	ELECT 22MF	20% 50V	C120	1-136-157-00	FILM 0.022MF	5% 50V
C006	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C121	1-136-157-00	FILM 0.022MF	5% 50V
C007	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C122	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C008	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C123	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C009	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C124	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C010	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C201	1-124-477-11	ELECT 47MF	20% 16V
C011	1-126-101-11	ELECT 100MF	20% 16V	C202	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C012	1-123-875-11	ELECT 10MF	20% 50V	C203	1-126-233-11	ELECT 22MF	20% 50V
C013	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	C204	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C014	1-126-233-11	ELECT 22MF	20% 50V	C205	1-126-233-11	ELECT 22MF	20% 50V
C015	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C206	1-136-169-00	FILM 0.22MF	5% 50V
				C207	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
				C208	1-124-902-00	ELECT 0.47MF	20% 50V
				C209	1-124-902-00	ELECT 0.47MF	20% 50V
				C210	1-124-902-00	ELECT 0.47MF	20% 50V
				C214	1-126-233-11	ELECT 22MF	20% 50V
				C215	1-124-477-11	ELECT 47MF	20% 16V
				C216	1-124-464-11	ELECT 0.22MF	20% 50V
				C217	1-124-464-11	ELECT 0.22MF	20% 50V
				C218	1-124-477-11	ELECT 47MF	20% 16V

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C219	1-136-157-00	FILM 0.022MF	5%	50V	D103	8-719-400-18	DIODE MA152WK
C220	1-130-471-00	MYLAR 0.001MF	5%	50V	D201	8-719-900-95	DIODE V09G
C221	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	D202	8-719-104-34	DIODE 1S283G
C222	1-136-169-00	FILM 0.22MF	5%	50V	D203	8-719-104-34	DIODE 1S283G
C223	1-136-153-00	FILM 0.01MF	5%	50V	D204	8-719-400-18	DIODE MA152WK
C224	1-124-463-00	ELECT 0.1MF	20%	50V	D206	8-719-400-18	DIODE MA152WK
C225	1-130-479-00	MYLAR 0.0047MF	5%	50V	D207	8-719-400-18	DIODE MA152WK
C226	1-124-791-11	ELECT 1MF	20%	50V	D208	8-719-105-45	DIODE RD3.3M-B1
C227	1-136-153-00	FILM 0.01MF	5%	50V	D209	8-719-105-45	DIODE RD3.3M-B1
C228	1-124-927-11	ELECT 4.7MF	20%	50V	D210	8-719-400-18	DIODE MA152WK
C229	1-124-927-11	ELECT 4.7MF	20%	50V	<DELAY LINE>		
C230	1-130-477-00	MYLAR 0.0033MF	5%	50V	DL001	1-415-632-11	DELAY LINE, Y
C231	1-130-481-00	MYLAR 0.0068MF	5%	50V	DL101	1-415-122-31	DELAY LINE, 1H (PAL)
C232	1-130-476-00	MYLAR 0.0027MF	5%	50V	<IC>		
C233	1-136-161-00	FILM 0.047MF	5%	50V	IC001	8-759-340-52	IC HD14052BP
C234	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	IC002	8-759-947-20	IC TDA4555-V8
C235	1-124-925-11	ELECT 2.2MF	20%	50V	IC003	8-752-034-85	IC CXA1216P
C236	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	IC004	8-759-946-99	IC TDA2595-V7
C237	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	IC005	8-759-040-53	IC MC14053BCP
C238	1-124-925-11	ELECT 2.2MF	20%	50V	IC006	8-759-232-64	IC TC74HC157AP
C239	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	IC007	8-759-232-21	IC TC74HC27AP
C240	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	IC008	8-759-604-39	IC M5F78M12
C241	1-124-925-11	ELECT 2.2MF	20%	50V	IC009	8-759-979-16	IC CX-7916
C242	1-124-925-11	ELECT 2.2MF	20%	50V	IC010	1-808-891-11	MODULE (SNY-9202)
C243	1-124-925-11	ELECT 2.2MF	20%	50V	IC012	8-759-945-58	IC RC4558P
C244	1-123-875-11	ELECT 10MF	20%	50V	<COIL>		
C245	1-123-875-11	ELECT 10MF	20%	50V	L001	1-410-478-11	INDUCTOR 47UH
C246	1-123-875-11	ELECT 10MF	20%	50V	L101	1-404-584-11	COIL
C247	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	L102	1-404-554-11	COIL
C249	1-126-101-11	ELECT 100MF	20%	16V	L103	1-404-539-11	COIL
C250	1-124-120-11	ELECT 220MF	20%	16V	L104	1-404-554-11	COIL
C251	1-126-101-11	ELECT 100MF	20%	16V	L105	1-404-554-11	COIL
C252	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	L106	1-410-466-41	INDUCTOR 4.7UH
C254	1-126-101-11	ELECT 100MF	20%	16V	L107	1-408-406-00	INDUCTOR 5.6UH
C255	1-123-875-11	ELECT 10MF	20%	50V	L108	1-410-478-11	INDUCTOR 47UH
C257	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	L109	1-410-209-51	INDUCTOR CHIP 27UH
C259	1-124-464-11	ELECT 0.22MF	20%	50V	L201	1-459-155-00	COIL (WITH CORE) 45UH
C260	1-124-477-11	ELECT 47MF	20%	16V	L202	1-459-155-00	COIL (WITH CORE) 45UH
C261	1-124-925-11	ELECT 2.2MF	20%	50V	<TRANSISTOR>		
C262	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	Q001	8-729-271-23	TRANSISTOR 2SC2712
C265	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	Q002	8-729-230-46	TRANSISTOR 2SA1162-YG
C349	1-126-233-11	ELECT 22MF	20%	50V	Q003	8-729-271-23	TRANSISTOR 2SC2712
C350	1-123-875-11	ELECT 10MF	20%	50V	Q004	8-729-271-23	TRANSISTOR 2SC2712
C351	1-136-169-00	FILM 0.22MF	5%	50V	Q005	8-729-271-23	TRANSISTOR 2SC2712
C352	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	Q006	8-729-271-23	TRANSISTOR 2SC2712
C353	1-123-875-11	ELECT 10MF	20%	50V	Q007	8-729-271-23	TRANSISTOR 2SC2712
C354	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	Q008	8-729-271-23	TRANSISTOR 2SC2712
<COM FILTER BLOCK>				Q009	8-729-271-23	TRANSISTOR 2SC2712	
CM001	1-466-162-22	BLOCK, COM FILTER (CFB-4)		Q010	8-729-271-23	TRANSISTOR 2SC2712	
<TRIMMER>				Q012	8-729-901-01	TRANSISTOR DTC144EK	
CT101	1-141-181-11	CAP, TRIMMER		Q013	8-729-901-01	TRANSISTOR DTC144EK	
CT102	1-141-181-11	CAP, TRIMMER		Q014	8-729-271-23	TRANSISTOR 2SC2712	
<DIODE>				Q015	8-729-271-23	TRANSISTOR 2SC2712	
D004	8-719-400-18	DIODE MA152WK		Q016	8-729-901-01	TRANSISTOR DTC144EK	
D006	8-719-105-82	DIODE RD5.1M-B2					
D010	8-719-105-99	DIODE RD6.2M-B1					
D101	8-719-400-18	DIODE MA152WK					
D102	8-719-400-18	DIODE MA152WK					

BA

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q017	8-729-901-01	TRANSISTOR DTC144EK		R016	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
Q018	8-729-900-53	TRANSISTOR DTC114EK		R017	1-216-691-11	METAL CHIP 47K 0.50% 1/10W	
Q019	8-729-900-53	TRANSISTOR DTC114EK		R018	1-216-647-11	METAL CHIP 680 0.50% 1/10W	
Q101	8-729-901-01	TRANSISTOR DTC144EK		R019	1-216-647-11	METAL CHIP 680 0.50% 1/10W	
Q102	8-729-271-23	TRANSISTOR 2SC2712		R020	1-216-047-00	METAL GLAZE 820 5% 1/10W	
Q103	8-729-901-01	TRANSISTOR DTC144EK		R021	1-216-643-11	METAL CHIP 470 0.50% 1/10W	
Q104	8-729-901-01	TRANSISTOR DTC144EK		R022	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
Q106	8-729-901-01	TRANSISTOR DTC144EK		R023	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
Q107	8-729-901-01	TRANSISTOR DTC144EK		R024	1-216-637-11	METAL CHIP 270 0.50% 1/10W	
Q108	8-729-901-01	TRANSISTOR DTC144EK		R025	1-216-637-11	METAL CHIP 270 0.50% 1/10W	
Q201	8-729-140-96	TRANSISTOR 2SD774-34		R026	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
Q202	8-729-230-46	TRANSISTOR 2SA1162-YG		R027	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
Q203	8-729-230-46	TRANSISTOR 2SA1162-YG		R028	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
Q204	8-729-230-46	TRANSISTOR 2SA1162-YG		R029	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q205	8-729-271-23	TRANSISTOR 2SC2712		R030	1-216-009-00	METAL GLAZE 22 5% 1/10W	
Q206	8-729-271-23	TRANSISTOR 2SC2712		R031	1-216-643-11	METAL CHIP 470 0.50% 1/10W	
Q207	8-729-271-23	TRANSISTOR 2SC2712		R032	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
Q208	8-729-271-23	TRANSISTOR 2SC2712		R033	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
Q209	8-729-271-23	TRANSISTOR 2SC2712		R034	1-216-047-00	METAL GLAZE 820 5% 1/10W	
Q210	8-729-230-46	TRANSISTOR 2SA1162-YG		R035	1-216-025-00	METAL GLAZE 100 5% 1/10W	
Q211	8-729-271-23	TRANSISTOR 2SC2712		R036	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q212	8-729-116-06	TRANSISTOR 2SK160-K6		R037	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q213	8-729-271-23	TRANSISTOR 2SC2712		R038	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
Q214	8-729-116-06	TRANSISTOR 2SK160-K6		R039	1-216-047-00	METAL GLAZE 820 5% 1/10W	
Q215	8-729-271-23	TRANSISTOR 2SC2712		R040	1-216-047-00	METAL GLAZE 820 5% 1/10W	
Q216	8-729-116-06	TRANSISTOR 2SK160-K6		R041	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q217	8-729-271-23	TRANSISTOR 2SC2712		R048	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
Q218	8-729-230-46	TRANSISTOR 2SA1162-YG		R049	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
Q219	8-729-230-46	TRANSISTOR 2SA1162-YG		R050	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
Q220	8-729-271-23	TRANSISTOR 2SC2712		R051	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q221	8-729-271-23	TRANSISTOR 2SC2712		R052	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
Q222	8-729-119-78	TRANSISTOR 2SC2785-HFE		R053	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
Q223	8-729-271-23	TRANSISTOR 2SC2712		R054	1-216-025-00	METAL GLAZE 100 5% 1/10W	
Q224	8-729-901-01	TRANSISTOR DTC144EK		R055	1-216-025-00	METAL GLAZE 100 5% 1/10W	
Q225	8-729-901-01	TRANSISTOR DTC144EK		R101	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q226	8-729-901-01	TRANSISTOR DTC144EK		R102	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
Q347	8-729-901-01	TRANSISTOR DTC144EK		R103	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
Q348	8-729-901-01	TRANSISTOR DTC144EK		R104	1-216-017-00	METAL GLAZE 47 5% 1/10W	
Q349	8-729-901-01	TRANSISTOR DTC144EK		R105	1-216-039-00	METAL GLAZE 390 5% 1/10W	
Q350	8-729-901-01	TRANSISTOR DTC144EK		R106	1-216-031-00	METAL GLAZE 180 5% 1/10W	
Q351	8-729-271-23	TRANSISTOR 2SC2712		R107	1-216-647-11	METAL CHIP 680 0.50% 1/10W	
Q352	8-729-271-23	TRANSISTOR 2SC2712		R108	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
Q355	8-729-271-23	TRANSISTOR 2SC2712		R109	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q356	8-729-901-01	TRANSISTOR DTC144EK		R111	1-216-066-00	METAL GLAZE 5.1K 5% 1/10W	
Q357	8-729-901-01	TRANSISTOR DTC144EK		R112	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
<RESISTOR>				R113	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1	1-216-001-00	METAL GLAZE 10 5% 1/10W		R114	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R8	1-216-001-00	METAL GLAZE 10 5% 1/10W		R115	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R11	1-216-001-00	METAL GLAZE 10 5% 1/10W		R116	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R002	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W		R117	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R003	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R118	1-216-665-11	METAL CHIP 3.9K 0.50% 1/10W	
R004	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W		R119	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R005	1-216-683-11	METAL CHIP 22K 0.50% 1/10W		R120	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R006	1-216-683-11	METAL CHIP 22K 0.50% 1/10W		R122	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R007	1-216-683-11	METAL CHIP 22K 0.50% 1/10W		R123	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R009	1-216-643-11	METAL CHIP 470 0.50% 1/10W		R124	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R010	1-216-651-11	METAL CHIP 1K 0.50% 1/10W		R126	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R012	1-216-691-11	METAL CHIP 47K 0.50% 1/10W		R127	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R013	1-216-683-11	METAL CHIP 22K 0.50% 1/10W		R128	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R014	1-216-651-11	METAL CHIP 1K 0.50% 1/10W		R140	1-216-689-11	METAL CHIP 39K 0.50% 1/10W	
R015	1-216-097-00	METAL GLAZE 100K 5% 1/10W					

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R141	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R265	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R142	1-216-681-11	METAL CHIP	18K 0.50% 1/10W	R266	1-216-047-00	METAL GLAZE	820 5% 1/10W
R143	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R267	1-216-031-00	METAL GLAZE	180 5% 1/10W
R144	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R268	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R145	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R269	1-216-017-00	METAL GLAZE	47 5% 1/10W
R146	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R270	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R149	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R271	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R201	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R272	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R202	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R273	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R204	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R274	1-216-017-00	METAL GLAZE	47 5% 1/10W
R205	1-216-119-00	METAL GLAZE	820K 5% 1/10W	R275	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R206	1-216-109-00	METAL GLAZE	330K 5% 1/10W	R276	1-216-017-00	METAL GLAZE	47 5% 1/10W
R207	1-216-025-00	METAL GLAZE	100 5% 1/10W	R277	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R208	1-216-037-00	METAL GLAZE	330 5% 1/10W	R278	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R209	1-216-037-00	METAL GLAZE	330 5% 1/10W	R279	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R210	1-216-037-00	METAL GLAZE	330 5% 1/10W	R280	1-216-025-00	METAL GLAZE	100 5% 1/10W
R211	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R281	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R212	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R282	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R213	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R283	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R216	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R284	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R217	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R285	1-216-025-00	METAL GLAZE	100 5% 1/10W
R220	1-216-025-00	METAL GLAZE	100 5% 1/10W	R286	1-216-025-00	METAL GLAZE	100 5% 1/10W
R221	1-216-025-00	METAL GLAZE	100 5% 1/10W	R287	1-216-025-00	METAL GLAZE	100 5% 1/10W
R222	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R288	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R224	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R289	1-216-025-00	METAL GLAZE	100 5% 1/10W
R225	1-216-099-00	METAL GLAZE	120K 5% 1/10W	R290	1-216-025-00	METAL GLAZE	100 5% 1/10W
R226	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R291	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R227	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W	R292	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R228	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R293	1-216-025-00	METAL GLAZE	100 5% 1/10W
R229	1-216-681-11	METAL CHIP	18K 0.50% 1/10W	R294	1-216-095-00	METAL GLAZE	82K 5% 1/10W
R230	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R295	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R231	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R296	1-216-095-00	METAL GLAZE	82K 5% 1/10W
R232	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W	R297	1-216-025-00	METAL GLAZE	100 5% 1/10W
R233	1-216-101-00	METAL GLAZE	150K 5% 1/10W	R298	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R234	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R299	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R235	1-216-099-00	METAL GLAZE	120K 5% 1/10W	R300	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R236	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R301	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R237	1-216-033-00	METAL GLAZE	220 5% 1/10W	R303	1-216-681-11	METAL CHIP	18K 0.50% 1/10W
R238	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R304	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R239	1-216-691-11	METAL CHIP	47K 0.50% 1/10W	R305	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R240	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R306	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R241	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R307	1-216-025-00	METAL GLAZE	100 5% 1/10W
R242	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W	R308	1-216-025-00	METAL GLAZE	100 5% 1/10W
R243	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R309	1-216-025-00	METAL GLAZE	100 5% 1/10W
R244	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R310	1-216-025-00	METAL GLAZE	100 5% 1/10W
R245	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R340	1-216-693-11	METAL CHIP	56K 0.50% 1/10W
R246	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R341	1-216-001-00	METAL GLAZE	10 5% 1/10W
R247	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W	R375	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R248	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R376	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R249	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R377	1-249-393-11	CARBON	10 5% 1/4W
R250	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R379	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R251	1-216-095-00	METAL GLAZE	82K 5% 1/10W	R380	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R252	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R381	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R253	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R382	1-216-095-00	METAL GLAZE	82K 5% 1/10W
R254	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R383	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R255	1-216-017-00	METAL GLAZE	47 5% 1/10W	R384	1-216-017-00	METAL GLAZE	47 5% 1/10W
R256	1-216-017-00	METAL GLAZE	47 5% 1/10W	R385	1-216-001-00	METAL GLAZE	10 5% 1/10W
R257	1-216-025-00	METAL GLAZE	100 5% 1/10W	R386	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R258	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R387	1-216-017-00	METAL GLAZE	47 5% 1/10W
R259	1-216-025-00	METAL GLAZE	100 5% 1/10W	R388	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R260	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R389	1-216-017-00	METAL GLAZE	47 5% 1/10W
R261	1-216-121-00	METAL GLAZE	1M 5% 1/10W				
R262	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R263	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W				
R264	1-216-651-11	METAL CHIP	1K 0.50% 1/10W				

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BB

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<VARIABLE RESISTOR>							
RV101	1-230-504-11	RES, ADJ, CARBON 220		C516	1-124-927-11	ELECT 4.7MF	20% 50V
RV102	1-228-993-00	RES, ADJ, CARBON 4.7K		C517	1-124-927-11	ELECT 4.7MF	20% 50V
RV201	1-228-995-00	RES, ADJ, CARBON 22K		C518	1-124-927-11	ELECT 4.7MF	20% 50V
RV202	1-228-996-00	RES, ADJ, CARBON 47K		C519	1-124-927-11	ELECT 4.7MF	20% 50V
RV203	1-228-993-00	RES, ADJ, CARBON 4.7K		C520	1-124-499-11	ELECT 1MF	20% 50V
				C521	1-123-875-11	ELECT 10MF	20% 50V
RV204	1-226-775-11	RES, ADJ, METAL GLAZE 100K		C650	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
RV205	1-226-775-11	RES, ADJ, METAL GLAZE 100K		C651	1-124-660-11	ELECT 47MF	20% 50V
<SWITCH>				C652	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
SW1	1-570-859-11	SWITCH, SLIDE		C653	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
<THERMISTOR>				C654	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
TH101	1-800-071-99	THERMISTOR		C655	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
<CRYSTAL>				C656	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
X101	1-567-413-11	VIBRATOR, CRYSTAL		C657	1-136-169-00	FILM 0.22MF	5% 50V
X102	1-527-789-00	VIBRATOR, CRYSTAL		C658	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
*****				C659	1-136-169-00	FILM 0.22MF	5% 50V
*A-1135-587-A BB BOARD, COMPLETE				C660	1-124-660-11	ELECT 47MF	20% 50V
*****				C661	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
*1-564-595-11 PLUG, CONNECTOR 14P				C662	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
*1-568-984-11 CONNECTOR, MALE 96P				C663	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
<CAPACITOR>				C664	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C402	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C665	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C404	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C666	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C405	1-126-101-11	ELECT 100MF	20% 16V	C667	1-136-169-00	FILM 0.22MF	5% 50V
C406	1-124-120-11	ELECT 220MF	20% 16V	C668	1-124-660-11	ELECT 47MF	20% 50V
C407	1-126-101-11	ELECT 100MF	20% 16V	C669	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C408	1-123-875-11	ELECT 10MF	20% 50V	C670	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C409	1-126-101-11	ELECT 100MF	20% 16V	C671	1-126-101-11	ELECT 100MF	20% 16V
C412	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C672	1-126-101-11	ELECT 100MF	20% 16V
C413	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C673	1-126-101-11	ELECT 100MF	10% 50V
C414	1-123-875-11	ELECT 10MF	20% 50V	C674	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C415	1-126-101-11	ELECT 100MF	20% 16V	C675	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C416	1-126-101-11	ELECT 100MF	20% 16V	C676	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C417	1-124-120-11	ELECT 220MF	20% 16V	C677	1-124-910-11	ELECT 47MF	20% 50V
C418	1-126-101-11	ELECT 100MF	20% 16V	C678	1-123-875-11	ELECT 10MF	20% 50V
C419	1-126-101-11	ELECT 100MF	20% 16V	C679	1-124-122-11	ELECT 100MF	20% 50V
C425	1-126-101-11	ELECT 100MF	20% 16V	C680	1-126-103-11	ELECT 470MF	20% 16V
C450	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	C681	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C451	1-126-103-11	ELECT 470MF	20% 16V	C682	1-124-910-11	ELECT 47MF	20% 50V
C453	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C683	1-123-875-11	ELECT 10MF	20% 50V
C501	1-124-463-00	ELECT 0.1MF	20% 50V	C684	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C502	1-123-875-11	ELECT 10MF	20% 50V	C685	1-126-103-11	ELECT 470MF	20% 16V
C503	1-124-477-11	ELECT 47MF	20% 16V	C686	1-124-122-11	ELECT 100MF	20% 50V
C504	1-124-477-11	ELECT 47MF	20% 16V	C687	1-124-910-11	ELECT 47MF	20% 50V
C505	1-124-927-11	ELECT 4.7MF	20% 50V	C688	1-123-875-11	ELECT 10MF	20% 50V
C506	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C689	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C507	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C690	1-126-103-11	ELECT 470MF	20% 16V
C508	1-124-477-11	ELECT 47MF	20% 16V	C691	1-124-122-11	ELECT 100MF	20% 50V
C509	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C692	1-124-122-11	ELECT 100MF	20% 50V
C510	1-124-477-11	ELECT 47MF	20% 16V	C693	1-124-122-11	ELECT 100MF	20% 50V
C511	1-126-103-11	ELECT 470MF	20% 16V	C694	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C512	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C695	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C513	1-124-477-11	ELECT 47MF	20% 16V	C696	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C514	1-124-927-11	ELECT 4.7MF	20% 50V	C697	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C515	1-124-927-11	ELECT 4.7MF	20% 50V	C901	1-123-875-11	ELECT 10MF	20% 50V
				C902	1-124-499-11	ELECT 1MF	20% 50V
				C903	1-126-233-11	ELECT 22MF	20% 50V
				C904	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
				C905	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
				C906	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
				C907	1-124-499-11	ELECT 1MF	20% 50V
				C908	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
				C909	1-124-927-11	ELECT 4.7MF	20% 50V

REF.NO.	PART NO.	DESCRIPTION
Q653	8-729-901-00	TRANSISTOR DTC124EK
Q654	8-729-112-65	TRANSISTOR 2SA1462
Q655	8-729-112-65	TRANSISTOR 2SA1462
Q656	8-729-901-00	TRANSISTOR DTC124EK
Q657	8-729-107-31	TRANSISTOR 2SC3545
Q658	8-729-107-31	TRANSISTOR 2SC3545
Q659	8-729-107-31	TRANSISTOR 2SC3545
Q660	8-729-107-31	TRANSISTOR 2SC3545
Q661	8-729-107-31	TRANSISTOR 2SC3545
Q662	8-729-107-31	TRANSISTOR 2SC3545
Q663	8-729-112-65	TRANSISTOR 2SA1462
Q664	8-729-107-31	TRANSISTOR 2SC3545
Q665	8-729-112-65	TRANSISTOR 2SA1462
Q666	8-729-116-06	TRANSISTOR 2SK160-K6
Q667	8-729-107-31	TRANSISTOR 2SC3545
Q668	8-729-112-65	TRANSISTOR 2SA1462
Q669	8-729-112-65	TRANSISTOR 2SA1462
Q670	8-729-112-65	TRANSISTOR 2SA1462
Q671	8-729-901-00	TRANSISTOR DTC124EK
Q672	8-729-901-00	TRANSISTOR DTC124EK
Q673	8-729-107-31	TRANSISTOR 2SC3545
Q674	8-729-107-31	TRANSISTOR 2SC3545
Q675	8-729-107-31	TRANSISTOR 2SC3545
Q676	8-729-107-31	TRANSISTOR 2SC3545
Q677	8-729-107-31	TRANSISTOR 2SC3545
Q678	8-729-107-31	TRANSISTOR 2SC3545
Q679	8-729-107-31	TRANSISTOR 2SC3545
Q680	8-729-107-31	TRANSISTOR 2SC3545
Q681	8-729-107-31	TRANSISTOR 2SC3545
Q682	8-729-107-31	TRANSISTOR 2SC3545
Q683	8-729-112-65	TRANSISTOR 2SA1462
Q684	8-729-107-31	TRANSISTOR 2SC3545
Q685	8-729-107-31	TRANSISTOR 2SC3545
Q686	8-729-107-31	TRANSISTOR 2SC3545
Q687	8-729-112-65	TRANSISTOR 2SA1462
Q688	8-729-112-65	TRANSISTOR 2SA1462
Q689	8-729-901-00	TRANSISTOR DTC124EK
Q690	8-729-901-00	TRANSISTOR DTC124EK
Q691	8-729-107-31	TRANSISTOR 2SC3545
Q692	8-729-107-31	TRANSISTOR 2SC3545
Q693	8-729-107-31	TRANSISTOR 2SC3545
Q694	8-729-107-31	TRANSISTOR 2SC3545
Q695	8-729-107-31	TRANSISTOR 2SC3545
Q696	8-729-107-31	TRANSISTOR 2SC3545
Q697	8-729-107-31	TRANSISTOR 2SC3545
Q698	8-729-107-31	TRANSISTOR 2SC3545
Q699	8-729-107-31	TRANSISTOR 2SC3545
Q701	8-729-107-31	TRANSISTOR 2SC3545
Q702	8-729-112-65	TRANSISTOR 2SA1462
Q703	8-729-107-31	TRANSISTOR 2SC3545
Q704	8-729-107-31	TRANSISTOR 2SC3545
Q705	8-729-107-31	TRANSISTOR 2SC3545
Q706	8-729-112-65	TRANSISTOR 2SA1462
Q707	8-729-112-65	TRANSISTOR 2SA1462
Q708	8-729-901-00	TRANSISTOR DTC124EK
Q709	8-729-901-00	TRANSISTOR DTC124EK
Q710	8-729-107-31	TRANSISTOR 2SC3545
Q711	8-729-107-31	TRANSISTOR 2SC3545
Q712	8-729-107-31	TRANSISTOR 2SC3545
Q713	8-729-107-31	TRANSISTOR 2SC3545
Q714	8-729-107-31	TRANSISTOR 2SC3545
Q715	8-729-107-31	TRANSISTOR 2SC3545
Q716	8-729-107-31	TRANSISTOR 2SC3545
Q717	8-729-107-31	TRANSISTOR 2SC3545

REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	Q718	8-729-107-31	TRANSISTOR 2SC3545	
	Q719	8-729-107-31	TRANSISTOR 2SC3545	
	Q720	8-729-112-65	TRANSISTOR 2SA1462	
	Q721	8-729-107-31	TRANSISTOR 2SC3545	
	Q722	8-729-107-31	TRANSISTOR 2SC3545	
	Q723	8-729-107-31	TRANSISTOR 2SC3545	
	Q724	8-729-116-06	TRANSISTOR 2SK160-K6	
	Q725	8-729-107-31	TRANSISTOR 2SC3545	
	Q726	8-729-107-31	TRANSISTOR 2SC3545	
	Q727	8-729-112-65	TRANSISTOR 2SA1462	
	Q728	8-729-923-06	TRANSISTOR FMW-8	
	Q729	8-729-112-65	TRANSISTOR 2SA1462	
	Q730	8-729-923-06	TRANSISTOR FMW-8	
	Q731	8-729-107-31	TRANSISTOR 2SC3545	
	Q732	8-729-107-31	TRANSISTOR 2SC3545	
	Q733	8-729-901-00	TRANSISTOR DTC124EK	
	Q734	8-729-271-23	TRANSISTOR 2SC2712	
	Q735	8-729-271-23	TRANSISTOR 2SC2712	
	Q736	8-729-112-65	TRANSISTOR 2SA1462	
	Q737	8-729-107-31	TRANSISTOR 2SC3545	
	Q738	8-729-116-06	TRANSISTOR 2SK160-K6	
	Q739	8-729-112-65	TRANSISTOR 2SA1462	
	Q740	8-729-107-31	TRANSISTOR 2SC3545	
	Q901	8-729-903-10	TRANSISTOR FMW1	
	Q902	8-729-903-10	TRANSISTOR FMW1	
	Q903	8-729-112-65	TRANSISTOR 2SA1462	
	Q904	8-729-901-00	TRANSISTOR DTC124EK	
	Q905	8-729-112-65	TRANSISTOR 2SA1462	
	Q906	8-729-162-13	TRANSISTOR 2SC1621	
	Q907	8-729-902-96	TRANSISTOR FMS1	
	Q908	8-729-271-23	TRANSISTOR 2SC2712	
	Q909	8-729-230-46	TRANSISTOR 2SA1162-YG	
	Q910	8-729-902-96	TRANSISTOR FMS1	
	Q911	8-729-162-13	TRANSISTOR 2SC1621	
	Q912	8-729-271-23	TRANSISTOR 2SC2712	
	Q913	8-729-230-46	TRANSISTOR 2SA1162-YG	
	Q914	8-729-230-46	TRANSISTOR 2SA1162-YG	
	Q915	8-729-902-96	TRANSISTOR FMS1	
	Q916	8-729-230-46	TRANSISTOR 2SA1162-YG	
	Q917	8-729-230-46	TRANSISTOR 2SA1162-YG	
	Q918	8-729-271-23	TRANSISTOR 2SC2712	
	Q919	8-729-271-23	TRANSISTOR 2SC2712	
	Q920	8-729-271-23	TRANSISTOR 2SC2712	
	Q921	8-729-271-23	TRANSISTOR 2SC2712	
	Q922	8-729-230-46	TRANSISTOR 2SA1162-YG	
	Q923	8-729-230-46	TRANSISTOR 2SA1162-YG	
	Q924	8-729-271-23	TRANSISTOR 2SC2712	
	<RESISTOR>			
	R401	1-216-025-00	METAL GLAZE 100 5%	1/10W
	R403	1-216-025-00	METAL GLAZE 100 5%	1/10W
	R450	1-216-073-00	METAL GLAZE 10K 5%	1/10W
	R451	1-216-077-00	METAL GLAZE 15K 5%	1/10W
	R452	1-216-037-00	METAL GLAZE 330 5%	1/10W
	R453	1-216-683-11	METAL CHIP 22K 0.50%	1/10W
	R454	1-216-643-11	METAL CHIP 470 0.50%	1/10W
	R455	1-216-073-00	METAL GLAZE 10K 5%	1/10W
	R456	1-216-073-00	METAL GLAZE 10K 5%	1/10W
	R459	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
	R460	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
	R461	1-216-025-00	METAL GLAZE 100 5%	1/10W
	R462	1-216-073-00	METAL GLAZE 10K 5%	1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R463	1-216-025-00	METAL GLAZE	100 5% 1/10W	R554	1-216-025-00	METAL GLAZE	100 5% 1/10W
R464	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R555	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R466	1-216-037-00	METAL GLAZE	330 5% 1/10W	R556	1-216-025-00	METAL GLAZE	100 5% 1/10W
R467	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R557	1-216-025-00	METAL GLAZE	100 5% 1/10W
R468	1-216-025-00	METAL GLAZE	100 5% 1/10W	R558	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R469	1-216-025-00	METAL GLAZE	100 5% 1/10W	R559	1-216-631-11	METAL CHIP	150 0.50% 1/10W
R470	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R560	1-216-025-00	METAL GLAZE	100 5% 1/10W
R471	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R561	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R472	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R562	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R473	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R563	1-216-035-00	METAL GLAZE	270 5% 1/10W
R474	1-216-025-00	METAL GLAZE	100 5% 1/10W	R564	1-216-043-00	METAL GLAZE	560 5% 1/10W
R501	1-216-022-00	METAL GLAZE	75 5% 1/10W	R565	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R502	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R566	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R503	1-216-025-00	METAL GLAZE	100 5% 1/10W	R567	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R504	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R568	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R505	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R569	1-216-295-00	METAL GLAZE	0 5% 1/10W
R506	1-216-022-00	METAL GLAZE	75 5% 1/10W	R570	1-216-022-00	METAL GLAZE	75 5% 1/10W
R507	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R571	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R508	1-216-025-00	METAL GLAZE	100 5% 1/10W	R572	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R509	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R573	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R510	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R574	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R511	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R575	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R512	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R576	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R513	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R577	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R514	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R578	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R515	1-216-025-00	METAL GLAZE	100 5% 1/10W	R579	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R516	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R580	1-216-025-00	METAL GLAZE	100 5% 1/10W
R517	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R581	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R518	1-216-025-00	METAL GLAZE	100 5% 1/10W	R582	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R519	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R583	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R520	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R584	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R521	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R585	1-216-025-00	METAL GLAZE	100 5% 1/10W
R522	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R586	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R523	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R587	1-216-025-00	METAL GLAZE	100 5% 1/10W
R524	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R588	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R525	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R589	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R526	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R590	1-216-025-00	METAL GLAZE	100 5% 1/10W
R527	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R591	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R528	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R592	1-216-025-00	METAL GLAZE	100 5% 1/10W
R529	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R593	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R530	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R594	1-216-025-00	METAL GLAZE	100 5% 1/10W
R531	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R595	1-216-693-11	METAL CHIP	56K 0.50% 1/10W
R532	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R596	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R533	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R597	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R534	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R598	1-216-025-00	METAL GLAZE	100 5% 1/10W
R535	1-216-001-00	METAL GLAZE	10 5% 1/10W	R599	1-216-025-00	METAL GLAZE	100 5% 1/10W
R536	1-216-001-00	METAL GLAZE	10 5% 1/10W	R600	1-216-025-00	METAL GLAZE	100 5% 1/10W
R537	1-216-001-00	METAL GLAZE	10 5% 1/10W	R601	1-216-631-11	METAL CHIP	150 0.50% 1/10W
R538	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R602	1-216-631-11	METAL CHIP	150 0.50% 1/10W
R539	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R603	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R540	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R604	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R541	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R605	1-216-025-00	METAL GLAZE	100 5% 1/10W
R542	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R606	1-216-025-00	METAL GLAZE	100 5% 1/10W
R543	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R607	1-216-117-00	METAL GLAZE	680K 5% 1/10W
R544	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W	R608	1-216-099-00	METAL GLAZE	120K 5% 1/10W
R545	1-216-025-00	METAL GLAZE	100 5% 1/10W	R609	1-216-025-00	METAL GLAZE	100 5% 1/10W
R546	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R610	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R547	1-216-631-11	METAL CHIP	150 0.50% 1/10W	R650	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R548	1-216-025-00	METAL GLAZE	100 5% 1/10W	R651	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R549	1-216-025-00	METAL GLAZE	100 5% 1/10W	R652	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R550	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R653	1-216-025-00	METAL GLAZE	100 5% 1/10W
R551	1-216-025-00	METAL GLAZE	100 5% 1/10W	R654	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R552	1-216-025-00	METAL GLAZE	100 5% 1/10W	R655	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R553	1-216-025-00	METAL GLAZE	100 5% 1/10W				

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R656	1-216-025-00	METAL GLAZE	100 5% 1/10W	R721	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R657	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R722	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R658	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R723	1-216-021-00	METAL GLAZE	68 5% 1/10W
R659	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R724	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R660	1-216-029-00	METAL GLAZE	150 5% 1/10W	R725	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R661	1-216-029-00	METAL GLAZE	150 5% 1/10W	R726	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R662	1-216-295-00	METAL GLAZE	0 5% 1/10W	R727	1-216-019-00	METAL GLAZE	56 5% 1/10W
R663	1-216-027-00	METAL GLAZE	120 5% 1/10W	R728	1-216-022-00	METAL GLAZE	75 5% 1/10W
R664	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R729	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R665	1-216-013-00	METAL GLAZE	33 5% 1/10W	R730	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R666	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R731	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R667	1-216-043-00	METAL GLAZE	560 5% 1/10W	R732	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R668	1-216-033-00	METAL GLAZE	220 5% 1/10W	R733	1-216-025-00	METAL GLAZE	100 5% 1/10W
R669	1-216-017-00	METAL GLAZE	47 5% 1/10W	R734	1-216-022-00	METAL GLAZE	75 5% 1/10W
R670	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R735	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R671	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R736	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R672	1-216-029-00	METAL GLAZE	150 5% 1/10W	R737	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R673	1-216-017-00	METAL GLAZE	47 5% 1/10W	R738	1-216-025-00	METAL GLAZE	100 5% 1/10W
R674	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R739	1-216-017-00	METAL GLAZE	47 5% 1/10W
R675	1-216-017-00	METAL GLAZE	47 5% 1/10W	R740	1-216-025-00	METAL GLAZE	100 5% 1/10W
R676	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R741	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R677	1-216-029-00	METAL GLAZE	150 5% 1/10W	R742	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R678	1-216-017-00	METAL GLAZE	47 5% 1/10W	R743	1-216-025-00	METAL GLAZE	100 5% 1/10W
R679	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R744	1-216-017-00	METAL GLAZE	47 5% 1/10W
R680	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R745	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R681	1-216-017-00	METAL GLAZE	47 5% 1/10W	R746	1-216-625-11	METAL CHIP	82 0.50% 1/10W
R682	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R747	1-216-025-00	METAL GLAZE	100 5% 1/10W
R683	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R748	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R684	1-216-017-00	METAL GLAZE	47 5% 1/10W	R749	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R685	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R750	1-216-629-11	METAL CHIP	120 0.50% 1/10W
R686	1-216-025-00	METAL GLAZE	100 5% 1/10W	R751	1-216-047-00	METAL GLAZE	820 5% 1/10W
R687	1-216-022-00	METAL GLAZE	75 5% 1/10W	R752	1-216-025-00	METAL GLAZE	100 5% 1/10W
R688	1-216-025-00	METAL GLAZE	100 5% 1/10W	R753	1-216-025-00	METAL GLAZE	100 5% 1/10W
R689	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R754	1-216-047-00	METAL GLAZE	820 5% 1/10W
R690	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R755	1-216-025-00	METAL GLAZE	100 5% 1/10W
R691	1-216-627-11	METAL CHIP	100 0.50% 1/10W	R756	1-216-025-00	METAL GLAZE	100 5% 1/10W
R692	1-216-627-11	METAL CHIP	100 0.50% 1/10W	R757	1-216-025-00	METAL GLAZE	100 5% 1/10W
R693	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R758	1-216-025-00	METAL GLAZE	100 5% 1/10W
R694	1-216-025-00	METAL GLAZE	100 5% 1/10W	R759	1-216-025-00	METAL GLAZE	100 5% 1/10W
R695	1-216-025-00	METAL GLAZE	100 5% 1/10W	R760	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R696	1-216-047-00	METAL GLAZE	820 5% 1/10W	R761	1-216-043-00	METAL GLAZE	560 5% 1/10W
R697	1-216-047-00	METAL GLAZE	820 5% 1/10W	R762	1-216-043-00	METAL GLAZE	560 5% 1/10W
R698	1-216-025-00	METAL GLAZE	100 5% 1/10W	R763	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R699	1-216-025-00	METAL GLAZE	100 5% 1/10W	R764	1-216-025-00	METAL GLAZE	100 5% 1/10W
R700	1-216-025-00	METAL GLAZE	100 5% 1/10W	R765	1-216-037-00	METAL GLAZE	330 5% 1/10W
R701	1-216-025-00	METAL GLAZE	100 5% 1/10W	R766	1-216-025-00	METAL GLAZE	100 5% 1/10W
R702	1-216-025-00	METAL GLAZE	100 5% 1/10W	R767	1-216-017-00	METAL GLAZE	47 5% 1/10W
R703	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R768	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R704	1-216-037-00	METAL GLAZE	330 5% 1/10W	R769	1-216-295-00	METAL GLAZE	0 5% 1/10W
R705	1-216-025-00	METAL GLAZE	100 5% 1/10W	R770	1-216-017-00	METAL GLAZE	47 5% 1/10W
R706	1-216-017-00	METAL GLAZE	47 5% 1/10W	R771	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R707	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R772	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R708	1-216-025-00	METAL GLAZE	100 5% 1/10W	R773	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R709	1-216-043-00	METAL GLAZE	560 5% 1/10W	R774	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R710	1-216-043-00	METAL GLAZE	560 5% 1/10W	R775	1-216-043-00	METAL GLAZE	560 5% 1/10W
R711	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R776	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R712	1-216-295-00	METAL GLAZE	0 5% 1/10W	R777	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R713	1-216-017-00	METAL GLAZE	47 5% 1/10W	R778	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R714	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R779	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R715	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R780	1-216-021-00	METAL GLAZE	68 5% 1/10W
R716	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R781	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R717	1-216-043-00	METAL GLAZE	560 5% 1/10W	R782	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R718	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R783	1-216-022-00	METAL GLAZE	75 5% 1/10W
R719	1-216-647-11	METAL CHIP	680 0.50% 1/10W				
R720	1-216-627-11	METAL CHIP	100 0.50% 1/10W				

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R784	1-216-019-00	METAL GLAZE	56 5% 1/10W	R912	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R785	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R913	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R786	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R914	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R787	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R915	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R788	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R917	1-216-687-11	METAL CHIP	33K 0.50% 1/10W
R789	1-216-022-00	METAL GLAZE	75 5% 1/10W	R918	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R790	1-216-025-00	METAL GLAZE	100 5% 1/10W	R919	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R791	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R920	1-216-105-00	METAL GLAZE	220K 5% 1/10W
R792	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R921	1-216-039-00	METAL GLAZE	390 5% 1/10W
R793	1-216-627-11	METAL CHIP	100 0.50% 1/10W	R922	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R794	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R923	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R795	1-216-627-11	METAL CHIP	100 0.50% 1/10W	R924	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R796	1-216-665-11	METAL CHIP	3.9K 0.50% 1/10W	R925	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R797	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R926	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R798	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W	R927	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R799	1-216-025-00	METAL GLAZE	100 5% 1/10W	R928	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R801	1-216-047-00	METAL GLAZE	820 5% 1/10W	R929	1-216-105-00	METAL GLAZE	220K 5% 1/10W
R802	1-216-025-00	METAL GLAZE	100 5% 1/10W	R930	1-216-025-00	METAL GLAZE	100 5% 1/10W
R803	1-216-047-00	METAL GLAZE	820 5% 1/10W	R931	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R804	1-216-025-00	METAL GLAZE	100 5% 1/10W	R932	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R805	1-216-025-00	METAL GLAZE	100 5% 1/10W	R933	1-216-039-00	METAL GLAZE	390 5% 1/10W
R806	1-216-025-00	METAL GLAZE	100 5% 1/10W	R934	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R807	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R935	1-216-095-00	METAL GLAZE	82K 5% 1/10W
R808	1-216-025-00	METAL GLAZE	100 5% 1/10W	R936	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R809	1-216-025-00	METAL GLAZE	100 5% 1/10W	R937	1-216-031-00	METAL GLAZE	180 5% 1/10W
R810	1-216-043-00	METAL GLAZE	560 5% 1/10W	R938	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R811	1-216-043-00	METAL GLAZE	560 5% 1/10W	R939	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R812	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R940	1-216-039-00	METAL GLAZE	390 5% 1/10W
R813	1-216-025-00	METAL GLAZE	100 5% 1/10W	R941	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R814	1-216-037-00	METAL GLAZE	330 5% 1/10W	R942	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R815	1-216-025-00	METAL GLAZE	100 5% 1/10W	R943	1-216-043-00	METAL GLAZE	560 5% 1/10W
R816	1-216-017-00	METAL GLAZE	47 5% 1/10W	R944	1-216-665-11	METAL CHIP	3.9K 0.50% 1/10W
R817	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R945	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R818	1-216-295-00	METAL GLAZE	0 5% 1/10W	R961	1-216-025-00	METAL GLAZE	100 5% 1/10W
R819	1-216-017-00	METAL GLAZE	47 5% 1/10W				
R820	1-216-647-11	METAL CHIP	680 0.50% 1/10W			<RELAY>	
R821	1-216-647-11	METAL CHIP	680 0.50% 1/10W	RL401	1-515-757-11	RELAY	
R822	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	RL402	1-515-757-11	RELAY	
R823	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	RL403	1-515-757-11	RELAY	
R824	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W			<VARIABLE RESISTOR>	
R825	1-216-021-00	METAL GLAZE	68 5% 1/10W	RV901	1-228-994-00	RES, ADJ, CARBON 10K	
R826	1-216-647-11	METAL CHIP	680 0.50% 1/10W			<SWITCH>	
R827	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	SW1	1-570-859-11	SWITCH, SLIDE	
R828	1-216-019-00	METAL GLAZE	56 5% 1/10W			*****	
R829	1-216-022-00	METAL GLAZE	75 5% 1/10W			*1-629-815-11 PB BOARD	
R830	1-216-073-00	METAL GLAZE	10K 5% 1/10W			*****	
R831	1-216-651-11	METAL CHIP	1K 0.50% 1/10W			*1-564-506-11 PLUG, CONNECTOR 3P	
R832	1-216-121-00	METAL GLAZE	1M 5% 1/10W			*4-341-752-01 EYELET	
R833	1-216-043-00	METAL GLAZE	560 5% 1/10W			<CAPACITOR>	
R834	1-216-647-11	METAL CHIP	680 0.50% 1/10W	C501	1-136-103-00	FILM	0.1MF 5% 200V
R835	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	C502	1-136-103-00	FILM	0.1MF 5% 200V
R836	1-216-631-11	METAL CHIP	150 0.50% 1/10W				
R837	1-216-631-11	METAL CHIP	150 0.50% 1/10W				
R901	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R902	1-216-665-11	METAL CHIP	3.9K 0.50% 1/10W				
R903	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W				
R904	1-216-647-11	METAL CHIP	680 0.50% 1/10W				
R905	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R906	1-216-643-11	METAL CHIP	470 0.50% 1/10W				
R907	1-216-647-11	METAL CHIP	680 0.50% 1/10W				
R908	1-216-683-11	METAL CHIP	22K 0.50% 1/10W				
R909	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W				
R910	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R911	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W				

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<TRANSFORMER>							
FBT1	Δ 1-439-466-11	TRANSFORMER ASSY, FLYBACK (NX-2500)		C41	1-108-704-11	MYLAR	0.1MF 10% 200V
FBT2	Δ 1-439-466-21	TRANSFORMER ASSY, FLYBACK (NX-2502)		C42	1-124-499-11	ELECT	1MF 20% 50V
<NEON LAMP>				C43	1-102-973-00	CERAMIC	100PF 5% 50V
NL501	1-519-108-99	LAMP, NEON		C44	1-162-117-00	CERAMIC	100PF 10% 500V
NL502	1-519-108-99	LAMP, NEON		C45	1-123-875-11	ELECT	10MF 20% 50V
*****				C46	1-126-101-11	ELECT	100MF 20% 16V
*A-1195-036-A	PA BOARD, COMPLETE			C47	1-124-927-11	ELECT	4.7MF 20% 50V
*****				C50	1-124-927-11	ELECT	4.7MF 20% 50V
1-506-348-99	PIN, CONNECOTR 5P			C51	Δ 1-136-948-11	FILM	24000MF 3% 1.6KV
*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			C52	1-124-494-00	ELECT	33MF 160V
*1-564-518-11	PLUG, CONNECTOR 3P			C53	1-136-134-00	FILM	1.5MF 5% 400V
*1-564-520-11	PLUG, CONNECTOR 5P			C54	Δ 1-136-134-00	FILM	1.5MF 5% 400V
*1-564-521-11	PLUG, CONNECTOR 6P			C55	1-123-875-11	ELECT	10MF 20% 50V
*1-564-523-11	PLUG, CONNECTOR 8P			C56	1-124-925-11	ELECT	2.2MF 20% 50V
*1-564-526-11	PLUG, CONNECTOR 11P			C57	1-136-165-00	FILM	0.1MF 5% 50V
*1-564-528-11	PLUG, CONNECTOR 13P			C58	1-124-477-11	ELECT	47MF 20% 16V
*4-341-751-01	EYELET			C59	1-136-165-00	FILM	0.1MF 5% 50V
*4-391-515-11	SHEET (A), INSULATOR			C60	1-136-153-00	FILM	0.01MF 5% 50V
<CAPACITOR>				C61	1-136-153-00	FILM	0.01MF 5% 50V
C1	1-124-499-11	ELECT	1MF 20% 50V	C62	1-136-165-00	FILM	0.1MF 5% 50V
C2	1-124-499-11	ELECT	1MF 20% 50V	C63	1-136-165-00	FILM	0.1MF 5% 50V
C3	1-124-927-11	ELECT	4.7MF 20% 50V	C64	1-136-153-00	FILM	0.01MF 5% 50V
C4	1-124-927-11	ELECT	4.7MF 20% 50V	C65	1-136-103-00	FILM	0.1MF 5% 200V
C5	1-124-927-11	ELECT	4.7MF 20% 50V	C66	1-124-046-00	ELECT	10MF 20% 160V
C6	1-124-927-11	ELECT	4.7MF 20% 50V	C67	1-136-153-00	FILM	0.01MF 5% 50V
C7	1-123-875-11	ELECT	10MF 20% 50V	C68	1-136-153-00	FILM	0.01MF 5% 50V
C8	1-136-153-00	FILM	0.01MF 5% 50V	<DIODE>			
C9	1-124-963-11	ELECT	33MF 20% 16V	D3	8-719-911-19	DIODE 1SS119	
C10	1-124-925-11	ELECT	2.2MF 20% 50V	D4	8-719-911-19	DIODE 1SS119	
C11	1-136-165-00	FILM	0.1MF 5% 50V	D5	8-719-109-85	DIODE RD5.1ES-B2	
C12	1-123-875-11	ELECT	10MF 20% 50V	D6	8-719-911-19	DIODE 1SS119	
C13	1-136-169-00	FILM	0.22MF 5% 50V	D7	8-719-911-19	DIODE 1SS119	
C14	1-123-875-11	ELECT	10MF 20% 50V	D8	8-719-911-19	DIODE 1SS119	
C15	1-124-119-00	ELECT	330MF 20% 16V	D9	8-719-911-19	DIODE 1SS119	
C16	1-102-824-00	CERAMIC	470PF 5% 50V	D10	8-719-109-85	DIODE RD5.1ES-B2	
C17	1-136-165-00	FILM	0.1MF 5% 50V	D11	8-719-911-19	DIODE 1SS119	
C18	1-136-165-00	FILM	0.1MF 5% 50V	D12	8-719-109-85	DIODE RD5.1ES-B2	
C19	1-136-165-00	FILM	0.1MF 5% 50V	D13	8-719-911-19	DIODE 1SS119	
C20	1-136-165-00	FILM	0.1MF 5% 50V	D14	8-719-110-17	DIODE RD10ES-B2	
C21	1-126-101-11	ELECT	100MF 20% 16V	D16	8-719-911-19	DIODE 1SS119	
C22	1-136-169-00	FILM	0.22MF 5% 50V	D18	8-719-911-19	DIODE 1SS119	
C23	1-130-475-00	MYLAR	0.0022MF 5% 50V	D20	8-719-945-81	DIODE ERC06-15SA	
C24	1-130-475-00	MYLAR	0.0022MF 5% 50V	D21	8-719-945-81	DIODE ERC06-15SA	
C25	1-102-973-00	CERAMIC	100PF 5% 50V	D22	8-719-300-80	DIODE RU-1C	
C26	1-123-875-11	ELECT	10MF 20% 50V	D23	8-719-900-26	DIODE ERD29-08J	
C27	1-124-925-11	ELECT	2.2MF 20% 50V	D24	8-719-911-19	DIODE 1SS119	
C28	1-136-159-00	FILM	0.033MF 5% 50V	D25	8-719-911-19	DIODE 1SS119	
C29	1-124-927-11	ELECT	4.7MF 20% 50V	D26	8-719-911-19	DIODE 1SS119	
C30	1-101-004-00	CERAMIC	0.01MF 5% 50V	D27	8-719-110-17	DIODE RD10ES-B2	
C31	1-101-004-00	CERAMIC	0.01MF 5% 50V	D28	8-719-911-19	DIODE 1SS119	
C32	1-102-973-00	CERAMIC	100PF 5% 50V	D29	8-719-911-19	DIODE 1SS119	
C33	1-102-973-00	CERAMIC	100PF 5% 50V	<IC>			
C34	1-102-973-00	CERAMIC	100PF 5% 50V	IC1	8-759-990-82	IC TL082CP	
C35	1-101-884-00	CERAMIC	56PF 5% 50V	IC2	8-759-103-93	IC UPC393C	
C36	1-136-165-00	FILM	0.1MF 5% 50V	IC3	8-759-103-93	IC UPC393C	
C37	1-102-030-00	CERAMIC	330PF 10% 500V	IC4	8-759-103-93	IC UPC393C	
C38	1-124-499-11	ELECT	1MF 20% 50V	IC5	8-759-604-39	IC M5F78M12	
C39	1-124-499-11	ELECT	1MF 20% 50V	IC6	8-759-100-75	IC UPC1394C	
C40	1-108-700-11	MYLAR	0.047MF 10% 200V	IC7	8-759-240-40	IC TC4040BP	

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

• The components identified by Δ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

HDIH-1200M
RM-1200

PA

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
IC8	8-759-045-72	IC MC14572UBCP		R24	1-249-429-11	CARBON 10K 5% 1/4W	
IC9	8-759-908-15	IC TL431CLP		R25	1-249-435-11	CARBON 33K 5% 1/4W	
<COIL>				R26	1-249-417-11	CARBON 1K 5% 1/4W	
L1	1-459-614-11	COIL, CHOKE 90UH		R28	1-215-423-00	METAL 1.2K 1% 1/6W	
L2	1-459-863-11	COIL, CHOKE 2.1MMH		Δ R29	Δ	METAL 1/6W	
L3 Δ	1-459-863-11	COIL, CHOKE 2.1MMH		Δ R30	Δ	METAL 1/6W	
L4 Δ	1-459-863-11	COIL, CHOKE 2.1MMH		R31	1-249-429-11	CARBON 10K 5% 1/4W	
L5	1-459-155-00	COIL (WITH CORE) 45UH		R32	1-215-473-00	METAL 150K 1% 1/6W	
L6	1-459-155-00	COIL (WITH CORE) 45UH		Δ R33	Δ	CARBON 1/4W	
<NEON LAMP>				Δ R34	Δ	CARBON 1/4W	
NL1	1-519-108-99	LAMP, NEON		R35	1-249-417-11	CARBON 1K 5% 1/4W	
<TRANSISTOR>				R36	1-249-423-11	CARBON 3.3K 5% 1/4W	
Q1	8-729-119-78	TRANSISTOR 2SC2785-HFE		R37	1-215-469-00	METAL 100K 1% 1/6W	
Q2	8-729-119-78	TRANSISTOR 2SC2785-HFE		R38	1-215-453-00	METAL 22K 1% 1/6W	
Q3	8-729-119-76	TRANSISTOR 2SA1175-HFE		R39	1-215-455-00	METAL 27K 1% 1/6W	
Q4	8-729-119-76	TRANSISTOR 2SA1175-HFE		R40	1-249-417-11	CARBON 1K 5% 1/4W	
Q5	8-729-119-80	TRANSISTOR 2SC2688-LK		Δ R41	Δ	CARBON 1/4W	
Q6	8-729-119-80	TRANSISTOR 2SC2688-LK		Δ R42	Δ	CARBON 1/4W	
Q7	8-729-119-78	TRANSISTOR 2SC2785-HFE		R43	1-215-461-00	METAL 47K 1% 1/6W	
Q8	8-729-119-78	TRANSISTOR 2SC2785-HFE		R44	1-215-432-00	METAL 3K 1% 1/6W	
Q9	8-729-119-78	TRANSISTOR 2SC2785-HFE		R45	1-215-432-00	METAL 3K 1% 1/6W	
Q10	8-729-208-10	TRANSISTOR 2SD1548		R46	1-215-432-00	METAL 3K 1% 1/6W	
Q11	8-729-201-62	TRANSISTOR 2SC2555		R47	1-215-432-00	METAL 3K 1% 1/6W	
Q12	8-729-119-76	TRANSISTOR 2SA1175-HFE		R48	1-215-469-00	METAL 100K 1% 1/6W	
Q13	8-729-119-76	TRANSISTOR 2SA1175-HFE		R49	1-215-469-00	METAL 100K 1% 1/6W	
Q14	8-729-119-78	TRANSISTOR 2SC2785-HFE		R50	1-215-469-00	METAL 100K 1% 1/6W	
Q15	8-729-119-78	TRANSISTOR 2SC2785-HFE		R53	1-249-419-11	CARBON 1.5K 5% 1/4W	
Q16	8-729-119-78	TRANSISTOR 2SC2785-HFE		R55	1-215-429-00	METAL 2.2K 1% 1/6W	
Q17	8-729-119-78	TRANSISTOR 2SC2785-HFE		R56	1-215-445-00	METAL 10K 1% 1/6W	
Q18	8-729-804-48	TRANSISTOR 2SC3675		R57	1-249-441-11	CARBON 100K 5% 1/4W	
Q19	8-729-801-88	TRANSISTOR 2SA1381		R58	1-249-441-11	CARBON 100K 5% 1/4W	
Q20	8-729-119-76	TRANSISTOR 2SA1175-HFE		R59	1-249-413-11	CARBON 470 5% 1/4W	
<RESISTOR>				R60	1-249-437-11	CARBON 47K 5% 1/4W	
Δ R1 Δ		METAL 1/6W		R61	1-215-443-00	METAL 8.2K 1% 1/6W	
R2	1-249-433-11	CARBON 22K 5% 1/4W		R62	1-215-455-00	METAL 27K 1% 1/6W	
R3	1-249-439-11	CARBON 68K 5% 1/4W		R63	1-249-431-11	CARBON 15K 5% 1/4W	
Δ R4 Δ		METAL 1/6W		R64	1-249-417-11	CARBON 1K 5% 1/4W	
R5	1-249-433-11	CARBON 22K 5% 1/4W		R65	1-249-435-11	CARBON 33K 5% 1/4W	
R6	1-249-439-11	CARBON 68K 5% 1/4W		R66	1-249-441-11	CARBON 100K 5% 1/4W	
R7	1-249-433-11	CARBON 22K 5% 1/4W		R67	1-247-903-00	CARBON 1M 5% 1/4W	
R8	1-249-433-11	CARBON 22K 5% 1/4W		R68	1-249-417-11	CARBON 1K 5% 1/4W	
R9	1-249-423-11	CARBON 3.3K 5% 1/4W		R69	1-249-423-11	CARBON 3.3K 5% 1/4W	
R10	1-249-429-11	CARBON 10K 5% 1/4W		R70	1-249-429-11	CARBON 10K 5% 1/4W	
R11	1-249-435-11	CARBON 33K 5% 1/4W		R71	1-249-417-11	CARBON 1K 5% 1/4W	
R12	1-249-429-11	CARBON 10K 5% 1/4W		R72	1-249-423-11	CARBON 3.3K 5% 1/4W	
R13	1-249-429-11	CARBON 10K 5% 1/4W		R73	1-249-423-11	CARBON 3.3K 5% 1/4W	
R14	1-215-453-00	METAL 22K 1% 1/6W		R74	1-249-417-11	CARBON 1K 5% 1/4W	
R15	1-215-453-00	METAL 22K 1% 1/6W		R75	1-249-417-11	CARBON 1K 5% 1/4W	
R16	1-249-433-11	CARBON 22K 5% 1/4W		R76	1-249-417-11	CARBON 1K 5% 1/4W	
R17	1-249-429-11	CARBON 10K 5% 1/4W		R77	1-216-489-11	METAL OXIDE 27K 5% 3W F	
R18	1-249-429-11	CARBON 10K 5% 1/4W		R78	1-216-489-11	METAL OXIDE 27K 5% 3W F	
R19	1-249-429-11	CARBON 10K 5% 1/4W		R79	1-249-425-11	CARBON 4.7K 5% 1/4W	
R20	1-249-433-11	CARBON 22K 5% 1/4W		R80	1-249-405-11	CARBON 100 5% 1/4W	
R21	1-249-441-11	CARBON 100K 5% 1/4W		R81	1-247-725-11	CARBON 10K 5% 1/4W F	
R22	1-215-463-00	METAL 56K 1% 1/6W		R82	1-249-441-11	CARBON 100K 5% 1/4W	
R23	1-215-455-00	METAL 27K 1% 1/6W		R83	1-247-725-11	CARBON 10K 5% 1/4W F	
				R84	1-247-881-00	CARBON 120K 5% 1/4W	
				R85	1-247-883-00	CARBON 150K 5% 1/4W	
				R86	1-249-460-11	CARBON 15K 5% 1/4W F	
				R87	1-249-421-11	CARBON 2.2K 5% 1/4W	
				R88	1-249-441-11	CARBON 100K 5% 1/4W	
				R89	1-216-378-11	METAL OXIDE 5.6 5% 2W F	
				R90	1-249-417-11	CARBON 1K 5% 1/4W	

Rc

Rca

Rcb

Rcc

Rcd

CF-1

REF.NO.	PART NO.	DESCRIPTION	REMARK
L1	1-408-789-21	INDUCTOR CHIP 100UH	
<TRANSISTOR>			
Q1	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q2	8-729-271-23	TRANSISTOR 2SC2712	
Q5	8-729-271-23	TRANSISTOR 2SC2712	
Q6	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q7	8-729-271-23	TRANSISTOR 2SC2712	
Q8	8-729-101-07	TRANSISTOR 2SB798-DL	
Q9	8-729-271-23	TRANSISTOR 2SC2712	
<RESISTOR>			
R1	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R2	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R3	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R4	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R5	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R6	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R10	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R11	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R12	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R13	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R14	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R15	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R16	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R17	1-216-028-00	METAL GLAZE 130 5% 1/10W	
R18	1-216-028-00	METAL GLAZE 130 5% 1/10W	
R19	1-216-028-00	METAL GLAZE 130 5% 1/10W	
R20	1-216-028-00	METAL GLAZE 130 5% 1/10W	
R21	1-216-028-00	METAL GLAZE 130 5% 1/10W	
R22	1-216-028-00	METAL GLAZE 130 5% 1/10W	
R23	1-216-028-00	METAL GLAZE 130 5% 1/10W	
R24	1-216-028-00	METAL GLAZE 130 5% 1/10W	
R25	1-216-028-00	METAL GLAZE 130 5% 1/10W	
R26	1-216-028-00	METAL GLAZE 130 5% 1/10W	
R27	1-216-028-00	METAL GLAZE 130 5% 1/10W	
R28	1-216-028-00	METAL GLAZE 130 5% 1/10W	
R29	1-216-028-00	METAL GLAZE 130 5% 1/10W	
R30	1-216-028-00	METAL GLAZE 130 5% 1/10W	
<SWITCH>			
S1	1-553-856-00	SWITCH, KEY BOARD	
<CRYSTAL>			
X1	1-527-476-00	OSCILLATOR, CERAMIC	

	*1-631-356-11	RCA BOARD	

<DIODE>			
D5	8-719-938-67	DIODE GL-3EG8	
D6	8-719-938-67	DIODE GL-3EG8	
D7	8-719-938-67	DIODE GL-3EG8	
D8	8-719-938-67	DIODE GL-3EG8	
D9	8-719-938-67	DIODE GL-3EG8	

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*1-631-357-11	RCB BOARD	

<DIODE>			
D10	8-719-938-67	DIODE GL-3EG8	
D11	8-719-938-67	DIODE GL-3EG8	
D12	8-719-938-67	DIODE GL-3EG8	
D13	8-719-938-67	DIODE GL-3EG8	
D14	8-719-938-67	DIODE GL-3EG8	

	*1-631-358-11	RCC BOARD	

<DIODE>			
D15	8-719-938-67	DIODE GL-3EG8	
D16	8-719-938-67	DIODE GL-3EG8	

	*1-631-493-11	RCD BOARD	

<DIODE>			
D1	8-719-938-67	DIODE GL-3EG8	

	*1-629-819-11	CF-1 BOARD	

	*1-575-136-11	CONNECTOR ASSY, FLAT CABLE	
<FILTER>			
C1	1-236-164-11	ENCAPSULATED COMPONENT	
C2	1-236-164-11	ENCAPSULATED COMPONENT	
C3	1-236-164-11	ENCAPSULATED COMPONENT	
C4	1-236-101-21	ENCAPSULATED COMPONENT	
C5	1-236-164-11	ENCAPSULATED COMPONENT	
C6	1-236-101-21	ENCAPSULATED COMPONENT	
C7	1-236-164-11	ENCAPSULATED COMPONENT	
C8	1-236-101-21	ENCAPSULATED COMPONENT	
C9	1-236-164-11	ENCAPSULATED COMPONENT	
C10	1-236-164-11	ENCAPSULATED COMPONENT	
C11	1-236-164-11	ENCAPSULATED COMPONENT	
C12	1-236-164-11	ENCAPSULATED COMPONENT	
C13	1-236-164-11	ENCAPSULATED COMPONENT	
C14	1-236-164-11	ENCAPSULATED COMPONENT	
C15	1-236-164-11	ENCAPSULATED COMPONENT	
C16	1-236-164-11	ENCAPSULATED COMPONENT	
C17	1-236-164-11	ENCAPSULATED COMPONENT	
C18	1-236-164-11	ENCAPSULATED COMPONENT	
C19	1-236-164-11	ENCAPSULATED COMPONENT	
C20	1-236-164-11	ENCAPSULATED COMPONENT	
C21	1-236-164-11	ENCAPSULATED COMPONENT	
C22	1-236-101-21	ENCAPSULATED COMPONENT	
C23	1-236-101-21	ENCAPSULATED COMPONENT	
C24	1-236-164-11	ENCAPSULATED COMPONENT	

CF-2

CBR

CBG

CBB

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*1-629-820-11	CF-2 BOARD *****	
	*1-564-505-11	PLUG, CONNECTOR 2P	
	*1-564-514-11	PLUG, CONNECTOR 11P	
	*1-564-528-41	PLUG, CONNECTOR 13P	
<CAPACITOR>			
C1	1-101-821-00	CERAMIC 0.0022MF	500V
C4	1-101-821-00	CERAMIC 0.0022MF	500V
C6	1-101-821-00	CERAMIC 0.0022MF	500V
C8	1-101-821-00	CERAMIC 0.0022MF	500V
C10	1-101-821-00	CERAMIC 0.0022MF	500V
<FILTER>			
C2	1-236-071-11	ENCAPSULATED COMPONENT	
C3	1-236-164-11	ENCAPSULATED COMPONENT	
C5	1-236-071-11	ENCAPSULATED COMPONENT	
C7	1-236-071-11	ENCAPSULATED COMPONENT	
C9	1-236-071-11	ENCAPSULATED COMPONENT	
C11	1-236-071-11	ENCAPSULATED COMPONENT	
C12	1-236-164-11	ENCAPSULATED COMPONENT	

	*1-629-826-11	CBR BOARD *****	
	*1-506-371-00	PIN, CONNECTOR 2P	
	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
	1-526-767-00	SOCKET, PICTURE TUBE	
	*1-564-507-11	PLUG, CONNECTOR 4P	
	1-575-099-11	LEAD ASSY, SIELD HIGH VOLTAGE	
<CAPACITOR>			
C301	1-162-114-00	CERAMIC 0.0047MF	2KV
<COIL>			
L303	1-408-401-00	INDUCTOR 2.2UH	
L304	1-408-159-00	COIL, SPOOK CHOKE 3.3UH	
L305	1-408-159-00	COIL, SPOOK CHOKE 3.3UH	
<NEON LAMP>			
NL301	1-519-423-11	LAMP, NEON	
NL302	1-519-423-11	LAMP, NEON	
NL303	1-519-368-21	LAMP, NEON	
NL304	1-519-368-21	LAMP, NEON	
NL305	1-519-423-11	LAMP, NEON	
<RESISTOR>			
R301	1-202-818-00	SOLID 1K 10% 1/2W	
R302	1-202-818-00	SOLID 1K 10% 1/2W	
R303	1-202-828-11	SOLID 6.8K 10% 1/2W	
R306	1-202-838-00	SOLID 100K 10% 1/2W	
R307	1-202-535-00	SOLID 27 10% 1/2W	
R308	1-202-525-00	SOLID 10 10% 1/2W	
R309	1-202-840-00	SOLID 150K 10% 1/2W	
<SPARK GAP>			
SG301	1-519-063-99	DISCHARGING GAP	

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*1-629-827-11	CBG BOARD *****	
	*1-506-371-00	PIN, CONNECTOR 2P	
	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
	1-526-767-00	SOCKET, PICTURE TUBE	
	*1-564-507-11	PLUG, CONNECTOR 4P	
	1-575-098-11	LEAD ASSY, SIELD HIGH VOLTAGE	
<CAPACITOR>			
C401	1-162-114-00	CERAMIC 0.0047MF	2KV
<COIL>			
L403	1-408-401-00	INDUCTOR 2.2UH	
L404	1-408-159-00	COIL, SPOOK CHOKE 3.3UH	
L405	1-408-159-00	COIL, SPOOK CHOKE 3.3UH	
<NEON LAMP>			
NL401	1-519-423-11	LAMP, NEON	
NL402	1-519-423-11	LAMP, NEON	
NL403	1-519-368-21	LAMP, NEON	
NL404	1-519-368-21	LAMP, NEON	
NL405	1-519-423-11	LAMP, NEON	
<RESISTOR>			
R401	1-202-818-00	SOLID 1K 10% 1/2W	
R402	1-202-818-00	SOLID 1K 10% 1/2W	
R403	1-202-828-11	SOLID 6.8K 10% 1/2W	
R406	1-202-838-00	SOLID 100K 10% 1/2W	
R407	1-202-535-00	SOLID 27 10% 1/2W	
R408	1-202-525-00	SOLID 10 10% 1/2W	
R409	1-202-840-00	SOLID 150K 10% 1/2W	
<SPARK GAP>			
SG401	1-519-063-99	DISCHARGING GAP	

	*1-629-828-11	CBB BOARD *****	
	*1-506-371-00	PIN, CONNECTOR 2P	
	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
	1-526-767-00	SOCKET, PICTURE TUBE	
	*1-564-507-11	PLUG, CONNECTOR 4P	
	1-575-097-11	LEAD ASSY, SIELD HIGH VOLTAGE	
<CAPACITOR>			
C501	1-162-114-00	CERAMIC 0.0047MF	2KV
<COIL>			
L503	1-408-401-00	INDUCTOR 2.2UH	
L504	1-408-159-00	COIL, SPOOK CHOKE 3.3UH	
L505	1-408-159-00	COIL, SPOOK CHOKE 3.3UH	
<NEON LAMP>			
NL501	1-519-423-11	LAMP, NEON	
NL502	1-519-423-11	LAMP, NEON	

CBB

CA(B)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
NL503	1-519-368-21	LAMP, NEON		C313	1-136-165-00	FILM	0.1MF 5% 50V
NL504	1-519-368-21	LAMP, NEON		C314	1-126-174-51	ELECT	10MF 20% 350V
NL505	1-519-423-11	LAMP, NEON		C315	1-102-038-00	CERAMIC	0.001MF 500V
				C316	1-102-050-00	CERAMIC	0.01MF 500V
<RESISTOR>				C317	1-124-768-11	ELECT	4.7MF 20% 50V
R501	1-202-818-00	SOLID	1K 10% 1/2W	C318	1-101-004-00	CERAMIC	0.01MF 50V
R502	1-202-818-00	SOLID	1K 10% 1/2W	C319	1-136-165-00	FILM	0.1MF 5% 50V
R503	1-202-828-11	SOLID	6.8K 10% 1/2W	C320	1-124-499-11	ELECT	1MF 20% 50V
R506	1-202-838-00	SOLID	100K 10% 1/2W	C321	1-126-233-11	ELECT	22MF 20% 50V
R507	1-202-535-00	SOLID	27 10% 1/2W	C322	1-126-233-11	ELECT	22MF 20% 50V
R508	1-202-525-00	SOLID	10 10% 1/2W	C323	1-126-233-11	ELECT	22MF 20% 50V
R509	1-202-840-00	SOLID	150K 10% 1/2W	C350	1-126-101-11	ELECT	100MF 20% 16V
				C351	1-126-101-11	ELECT	100MF 20% 16V
				C352	1-123-875-11	ELECT	10MF 20% 50V
<SPARK GAP>				<DIODE>			
SG501	1-519-063-99	DISCHARGING GAP		D30	8-719-911-19	DIODE 1SS119	
*****				D31	8-719-901-83	DIODE 1SS83	
*A-1335-014-A CA (B) BOARD, COMPLETE				D32	8-719-901-83	DIODE 1SS83	
*****				D33	8-719-911-19	DIODE 1SS119	
*1-526-575-00 SOCKET, PLUG 1P				D34	8-719-911-19	DIODE 1SS119	
*1-564-507-11 PLUG, CONNECTOR 4P				D35	8-719-900-95	DIODE V09G	
*1-564-516-11 PLUG, CONNECTOR 13P				D36	8-719-900-95	DIODE V09G	
<CAPACITOR>				D37	8-719-971-20	DIODE ERC38-06	
C30	1-126-101-11	ELECT	100MF 20% 16V	D38	8-719-110-31	DIODE RD12ES-B2	
C31	1-126-101-11	ELECT	100MF 20% 16V	D39	8-719-901-83	DIODE 1SS83	
C32	1-126-233-11	ELECT	22MF 20% 50V	D301	8-719-901-83	DIODE 1SS83	
C33	1-126-233-11	ELECT	22MF 20% 50V	D303	8-719-109-51	DIODE RD2.0ES-B2	
C34	1-101-004-00	CERAMIC	0.01MF 50V	D304	8-719-911-19	DIODE 1SS119	
C35	1-124-927-11	ELECT	4.7MF 20% 50V	D305	8-719-901-83	DIODE 1SS83	
C36	1-126-101-11	ELECT	100MF 20% 16V	D306	8-719-911-19	DIODE 1SS119	
C37	1-126-233-11	ELECT	22MF 20% 50V	D307	8-719-911-19	DIODE 1SS119	
C38	1-101-004-00	CERAMIC	0.01MF 50V	D308	8-719-901-83	DIODE 1SS83	
C39	1-102-978-00	CERAMIC	220PF 5% 50V	D309	8-719-911-19	DIODE 1SS119	
C40	1-102-978-00	CERAMIC	220PF 5% 50V	D310	8-719-109-51	DIODE RD2.0ES-B2	
C41	1-102-973-00	CERAMIC	100PF 5% 50V	D311	8-719-911-19	DIODE 1SS119	
C42	1-162-117-00	CERAMIC	100PF 10% 500V	D312	8-719-911-19	DIODE 1SS119	
C43	1-101-004-00	CERAMIC	0.01MF 50V	D313	8-719-911-19	DIODE 1SS119	
C44	1-126-233-11	ELECT	22MF 20% 50V	D314	8-719-110-36	DIODE RD13ES-B2	
C45	1-101-004-00	CERAMIC	0.01MF 50V	D315	8-719-109-66	DIODE RD3.3ES-B2	
C46	1-126-233-11	ELECT	22MF 20% 50V	<IC>			
C47	1-126-134-11	ELECT	4.7MF 20% 350V	IC301	8-759-821-61	IC VPH05	
C48	1-123-932-00	ELECT	4.7MF 20% 160V	IC302	8-759-990-82	IC TL082CP	
C49	1-124-798-11	ELECT	1MF 20% 160V	IC303	8-749-920-88	IC SNY-8C02	
C50	1-124-798-11	ELECT	1MF 20% 160V	<COIL>			
C51	1-102-050-00	CERAMIC	0.01MF 500V	L301	1-408-880-00	INDUCTOR	0.68UH
C52	1-102-050-00	CERAMIC	0.01MF 500V	<TRANSISTOR>			
C53	1-124-499-11	ELECT	1MF 20% 50V	Q30	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C301	1-124-282-00	ELECT	22MF 20% 16V	Q31	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C302	1-124-910-11	ELECT	47MF 20% 50V	Q32	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C303	1-126-101-11	ELECT	100MF 20% 16V	Q33	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C304	1-126-101-11	ELECT	100MF 20% 16V	Q34	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C305	1-126-233-11	ELECT	22MF 20% 50V	Q35	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C306	1-102-973-00	CERAMIC	100PF 5% 50V	Q36	8-729-820-82	TRANSISTOR 2SA1208	
C307	1-102-816-00	CERAMIC	120PF 5% 50V	Q37	8-729-820-82	TRANSISTOR 2SA1208	
C308	1-124-799-11	ELECT	2.2MF 20% 160V	Q38	8-729-891-02	TRANSISTOR 2SC2910	
C309	1-124-799-11	ELECT	2.2MF 20% 160V	Q39	8-729-891-02	TRANSISTOR 2SC2910	
C310	1-124-634-11	ELECT	1MF 20% 250V				
C311	1-126-233-11	ELECT	22MF 20% 50V				
C312	1-102-121-00	CERAMIC	0.0022MF 10% 50V				

CA(B)

CA(RG)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q40	8-729-820-82	TRANSISTOR 2SA1208		R322	1-215-441-00	METAL 6.8K 1% 1/6W	
Q41	8-729-903-68	TRANSISTOR 2SD982		R323	1-215-481-00	METAL 330K 1% 1/6W	
Q42	8-729-801-88	TRANSISTOR 2SA1381		R324	1-215-433-00	METAL 3.3K 1% 1/6W	
Q43	8-729-900-36	TRANSISTOR DTC124ES		R325	1-249-431-11	CARBON 15K 5% 1/4W	
Q301	8-729-119-78	TRANSISTOR 2SC2785-HFE		R326	1-249-431-11	CARBON 15K 5% 1/4W	
Q302	8-729-140-50	TRANSISTOR 2SC3209LK		R327	1-249-415-11	CARBON 680 5% 1/4W	
Q303	8-729-801-88	TRANSISTOR 2SA1381		R328	1-249-405-11	CARBON 100 5% 1/4W	
Q304	8-729-801-88	TRANSISTOR 2SA1381		R329	1-249-421-11	CARBON 2.2K 5% 1/4W	F
Q305	8-729-119-78	TRANSISTOR 2SC2785-HFE		R330	1-215-431-00	METAL 2.7K 1% 1/6W	
Q306	8-729-140-50	TRANSISTOR 2SC3209LK		R331	1-202-549-00	SOLID 100 5% 1/2W	
Q307	8-729-801-88	TRANSISTOR 2SA1381		R332	1-202-818-00	SOLID 1K 10% 1/2W	
Q308	8-729-900-63	TRANSISTOR DTA124ES		R333	1-249-421-11	CARBON 2.2K 5% 1/4W	F
Q309	8-729-900-63	TRANSISTOR DTA124ES		R334	1-215-469-00	METAL 100K 1% 1/6W	
Q310	8-729-900-36	TRANSISTOR DTC124ES		R335	1-249-429-11	CARBON 10K 5% 1/4W	
Q311	8-729-105-74	TRANSISTOR 2SK523-M1		R336	1-202-549-00	SOLID 100 5% 1/2W	
Q312	8-729-119-78	TRANSISTOR 2SC2785-HFE		R337	1-215-443-00	METAL 8.2K 1% 1/6W	
<RESISTOR>				R338	1-215-435-00	METAL 3.9K 1% 1/6W	
R50	1-249-421-11	CARBON 2.2K 5% 1/4W		R339	1-249-421-11	CARBON 2.2K 5% 1/4W	
R51	1-249-427-11	CARBON 6.8K 5% 1/4W		R340	1-215-453-00	METAL 22K 1% 1/6W	
R52	1-249-393-11	CARBON 10 5% 1/4W		R341	1-215-421-00	METAL 1K 1% 1/6W	
R53	1-249-427-11	CARBON 6.8K 5% 1/4W		R342	1-249-417-11	CARBON 1K 5% 1/4W	
R54	1-215-437-00	METAL 4.7K 1% 1/6W		R343	1-247-903-00	CARBON 1M 5% 1/4W	
R55	1-215-439-00	METAL 5.6K 1% 1/6W		R344	1-249-427-11	CARBON 6.8K 5% 1/4W	
R56	1-215-467-00	METAL 82K 1% 1/6W		R345	1-249-405-11	CARBON 100 5% 1/4W	
R57	1-249-405-11	CARBON 100 5% 1/4W		R346	1-247-895-00	CARBON 470K 5% 1/4W	
R58	1-249-441-11	CARBON 100K 5% 1/4W		R351	1-215-447-00	METAL 12K 1% 1/6W	
R59	1-249-429-11	CARBON 10K 5% 1/4W		R352	1-249-421-11	CARBON 2.2K 5% 1/4W	
R60	1-249-425-11	CARBON 4.7K 5% 1/4W		R353	1-249-403-11	CARBON 68 5% 1/4W	F
R61	1-249-429-11	CARBON 10K 5% 1/4W		R354	1-215-457-00	METAL 33K 1% 1/6W	
R62	1-249-429-11	CARBON 10K 5% 1/4W		R356	1-215-457-00	METAL 33K 1% 1/6W	
R63	1-249-421-11	CARBON 2.2K 5% 1/4W		*****			
R64	1-249-425-11	CARBON 4.7K 5% 1/4W		*A-1335-015-A CA (RG) BOARD, COMPLETE			
R65	1-249-425-11	CARBON 4.7K 5% 1/4W		*****			
R66	1-249-417-11	CARBON 1K 5% 1/4W	F	*1-526-575-00	SOCKET, PLUG 1P		
R67	1-249-397-11	CARBON 22 5% 1/4W		*1-564-507-11	PLUG, CONNECTOR 4P		
R68	1-249-397-11	CARBON 22 5% 1/4W	F	*1-564-514-11	PLUG, CONNECTOR 11P		
R69	1-249-397-11	CARBON 22 5% 1/4W	F	*1-564-515-11	PLUG, CONNECTOR 12P		
R70	1-249-399-11	CARBON 33 5% 1/4W		*1-564-516-11	PLUG, CONNECTOR 13P		
R71	1-249-399-11	CARBON 33 5% 1/4W		*1-568-979-11	CONNECTOR 30P		
R72	1-249-397-11	CARBON 22 5% 1/4W	F	*4-363-404-00	HOLDER, IC		
R73	1-249-403-11	CARBON 68 5% 1/4W		4-391-519-01	SHEET (E), INSULATOR		
R74	1-249-429-11	CARBON 10K 5% 1/4W	F	<CAPACITOR>			
R75	1-249-429-11	CARBON 10K 5% 1/4W		C1	1-123-875-11	ELECT 10MF 20% 50V	
R76	1-202-719-00	SOLID 1M 10% 1/2W		C2	1-126-101-11	ELECT 100MF 20% 16V	
R77	1-247-903-00	CARBON 1M 5% 1/4W		C3	1-123-875-11	ELECT 10MF 20% 50V	
R301	1-215-401-11	METAL 150 1% 1/6W		C4	1-126-101-11	ELECT 100MF 20% 16V	
R302	1-215-401-11	METAL 150 1% 1/6W		C5	1-126-233-11	ELECT 22MF 20% 50V	
R303	1-215-461-00	METAL 47K 1% 1/6W		C6	1-126-101-11	ELECT 100MF 20% 16V	
R304	1-215-469-00	METAL 100K 1% 1/6W		C7	1-126-233-11	ELECT 22MF 20% 50V	
R305	1-215-469-00	METAL 100K 1% 1/6W		C8	1-102-820-00	CERAMIC 330PF 5% 50V	
R306	1-215-471-00	METAL 120K 1% 1/6W		C9	1-101-880-00	CERAMIC 47PF 5% 50V	
R307	1-249-421-11	CARBON 2.2K 5% 1/4W		C10	1-101-004-00	CERAMIC 0.01MF 50V	
R308	1-249-403-11	CARBON 68 5% 1/4W		C11	1-101-004-00	CERAMIC 0.01MF 50V	
R309	1-215-429-00	METAL 2.2K 1% 1/6W		C12	1-101-004-00	CERAMIC 0.01MF 50V	
R311	1-249-421-11	CARBON 2.2K 5% 1/4W		C13	1-101-004-00	CERAMIC 0.01MF 50V	
R312	1-215-389-00	METAL 47 1% 1/6W		C14	1-126-233-11	ELECT 22MF 20% 50V	
R316	1-215-473-00	METAL 150K 1% 1/6W		C15	1-102-963-00	CERAMIC 33PF 5% 50V	
R317	1-249-421-11	CARBON 2.2K 5% 1/4W		C16	1-126-233-11	ELECT 22MF 20% 50V	
R318	1-249-427-11	CARBON 6.8K 5% 1/4W		C17	1-136-165-00	FILM 0.1MF 5% 50V	
R319	1-215-453-00	METAL 22K 1% 1/6W		C18	1-136-165-00	FILM 0.1MF 5% 50V	
R320	1-215-469-00	METAL 100K 1% 1/6W					
R321	1-215-471-00	METAL 120K 1% 1/6W					

CA(RG)

REF.NO.	PART NO.	DESCRIPTION			REMARK	REF.NO.	PART NO.	DESCRIPTION		REMARK
C19	1-136-165-00	FILM	0.1MF	5%	50V	D13	8-719-109-85	DIODE RD5.1ES-B2		
C20	1-136-165-00	FILM	0.1MF	5%	50V	D101	8-719-901-83	DIODE 1SS83		
C21	1-126-233-11	ELECT	22MF	20%	50V	D103	8-719-109-51	DIODE RD2.0ES-B2		
C22	1-126-103-11	ELECT	470MF	20%	16V	D104	8-719-911-19	DIODE 1SS119		
C101	1-124-282-00	ELECT	22MF	20%	16V					
C102	1-124-477-11	ELECT	47MF	20%	16V	D105	8-719-901-83	DIODE 1SS83		
C103	1-126-101-11	ELECT	100MF	20%	16V	D106	8-719-911-19	DIODE 1SS119		
C104	1-126-101-11	ELECT	100MF	20%	16V	D107	8-719-911-19	DIODE 1SS119		
C105	1-126-233-11	ELECT	22MF	20%	50V	D108	8-719-901-83	DIODE 1SS83		
C106	1-102-973-00	CERAMIC	100PF	5%	50V	D109	8-719-911-19	DIODE 1SS119		
C107	1-102-816-00	CERAMIC	120PF	5%	50V					
C108	1-124-799-11	ELECT	2.2MF	20%	160V	D110	8-719-109-51	DIODE RD2.0ES-B2		
C109	1-124-799-11	ELECT	2.2MF	20%	160V	D111	8-719-911-19	DIODE 1SS119		
C110	1-124-634-11	ELECT	1MF	20%	250V	D112	8-719-911-19	DIODE 1SS119		
C111	1-126-233-11	ELECT	22MF	20%	50V	D113	8-719-911-19	DIODE 1SS119		
C112	1-102-121-00	CERAMIC	0.0022MF	10%	50V	D114	8-719-110-36	DIODE RD13ES-B2		
C113	1-136-165-00	FILM	0.1MF	5%	50V	D115	8-719-911-19	DIODE 1SS119		
C114	1-126-174-51	ELECT	10MF	20%	350V	D201	8-719-901-83	DIODE 1SS83		
C115	1-102-038-00	CERAMIC	0.001MF		500V	D203	8-719-109-51	DIODE RD2.0ES-B2		
C116	1-102-050-00	CERAMIC	0.01MF		500V	D204	8-719-911-19	DIODE 1SS119		
C117	1-124-768-11	ELECT	4.7MF	20%	50V	D205	8-719-901-83	DIODE 1SS83		
C118	1-101-004-00	CERAMIC	0.01MF		50V	D206	8-719-911-19	DIODE 1SS119		
C119	1-136-165-00	FILM	0.1MF	5%	50V	D207	8-719-911-19	DIODE 1SS119		
C120	1-124-499-11	ELECT	1MF	20%	50V	D208	8-719-901-83	DIODE 1SS83		
C121	1-126-233-11	ELECT	22MF	20%	50V	D209	8-719-911-19	DIODE 1SS119		
C122	1-126-233-11	ELECT	22MF	20%	50V	D210	8-719-109-51	DIODE RD2.0ES-B2		
C123	1-126-233-11	ELECT	22MF	20%	50V					
C201	1-124-282-00	ELECT	22MF	20%	16V	D211	8-719-911-19	DIODE 1SS119		
C202	1-126-233-11	ELECT	22MF	20%	50V	D212	8-719-911-19	DIODE 1SS119		
C203	1-126-101-11	ELECT	100MF	20%	16V	D213	8-719-911-19	DIODE 1SS119		
C204	1-126-101-11	ELECT	100MF	20%	16V	D214	8-719-110-36	DIODE RD13ES-B2		
C205	1-126-233-11	ELECT	22MF	20%	50V					
C206	1-102-973-00	CERAMIC	100PF	5%	50V	<IC>				
C207	1-102-816-00	CERAMIC	120PF	5%	50V	IC1	8-759-179-12	IC UPC7912H		
C208	1-124-799-11	ELECT	2.2MF	20%	160V	IC2	8-759-982-13	IC RC7812FA		
C209	1-124-799-11	ELECT	2.2MF	20%	160V	IC3	8-759-982-21	IC RC78L05A		
C210	1-124-634-11	ELECT	1MF	20%	250V	IC4	8-759-000-01	IC MC74HC4538N		
C211	1-126-233-11	ELECT	22MF	20%	50V	IC5	8-759-984-55	IC MB675429		
C212	1-102-121-00	CERAMIC	0.0022MF	10%	50V	IC6	8-759-202-55	IC TC74HC244P		
C213	1-136-165-00	FILM	0.1MF	5%	50V	IC7	8-759-202-11	IC TC74HC00P		
C214	1-126-174-51	ELECT	10MF	20%	350V	IC8	8-759-990-82	IC TL082CP		
C215	1-102-038-00	CERAMIC	0.001MF		500V	IC101	8-759-821-61	IC VPH05		
C216	1-102-050-00	CERAMIC	0.01MF		500V	IC102	8-759-990-82	IC TL082CP		
C217	1-124-768-11	ELECT	4.7MF	20%	50V	IC103	8-749-920-88	IC SNY-8C02		
C218	1-101-004-00	CERAMIC	0.01MF		50V	IC201	8-759-821-61	IC VPH05		
C219	1-136-165-00	FILM	0.1MF	5%	50V	IC202	8-759-990-82	IC TL082CP		
C220	1-124-499-11	ELECT	1MF	20%	50V	IC203	8-749-920-88	IC SNY-8C02		
C221	1-126-233-11	ELECT	22MF	20%	50V	<COIL>				
C222	1-126-233-11	ELECT	22MF	20%	50V	L101	1-408-880-00	INDUCTOR	0.68UH	
C223	1-126-233-11	ELECT	22MF	20%	50V	L201	1-408-880-00	INDUCTOR	0.68UH	
<DIODE>						<TRANSISTOR>				
D1	8-719-900-95	DIODE V09G				Q1	8-729-119-78	TRANSISTOR 2SC2785-HFE		
D2	8-719-900-95	DIODE V09G				Q2	8-729-900-36	TRANSISTOR DTC124ES		
D3	8-719-109-89	DIODE RD5.6ES-B2				Q3	8-729-900-36	TRANSISTOR DTC124ES		
D4	8-719-911-19	DIODE 1SS119				Q4	8-729-119-78	TRANSISTOR 2SC2785-HFE		
D5	8-719-911-19	DIODE 1SS119				Q5	8-729-119-76	TRANSISTOR 2SA1175-HFE		
D6	8-719-911-19	DIODE 1SS119				Q6	8-729-119-78	TRANSISTOR 2SC2785-HFE		
D7	8-719-911-19	DIODE 1SS119				Q7	8-729-119-76	TRANSISTOR 2SA1175-HFE		
D8	8-719-911-19	DIODE 1SS119				Q8	8-729-119-76	TRANSISTOR 2SA1175-HFE		
D9	8-719-109-93	DIODE RD6.2ES-B2				Q9	8-729-119-76	TRANSISTOR 2SA1175-HFE		
D11	8-719-938-28	DIODE ERA22-06				Q10	8-729-119-78	TRANSISTOR 2SC2785-HFE		
D12	8-719-911-19	DIODE 1SS119				Q11	8-729-119-78	TRANSISTOR 2SC2785-HFE		

CA(RG)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
Q12	8-729-119-78	TRANSISTOR 2SC2785-HFE		R29	1-249-429-11	CARBON	10K 5% 1/4W
Q13	8-729-119-76	TRANSISTOR 2SA1175-HFE		R30	1-215-469-00	METAL	100K 1% 1/6W
Q14	8-729-119-78	TRANSISTOR 2SC2785-HFE		R31	1-249-429-11	CARBON	10K 5% 1/4W
Q15	8-729-119-78	TRANSISTOR 2SC2785-HFE		R32	1-215-443-00	METAL	8.2K 1% 1/6W
Q16	8-729-119-78	TRANSISTOR 2SC2785-HFE		R33	1-215-443-00	METAL	8.2K 1% 1/6W
Q17	8-729-119-78	TRANSISTOR 2SC2785-HFE		R34	1-215-443-00	METAL	8.2K 1% 1/6W
Q18	8-729-119-78	TRANSISTOR 2SC2785-HFE		R35	1-247-887-00	CARBON	220K 5% 1/4W
Q19	8-729-119-76	TRANSISTOR 2SA1175-HFE		R36	1-247-887-00	CARBON	220K 5% 1/4W
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE		R37	1-247-887-00	CARBON	220K 5% 1/4W
Q102	8-729-140-50	TRANSISTOR 2SC3209LK		R38	1-249-441-11	CARBON	100K 5% 1/4W
Q103	8-729-801-88	TRANSISTOR 2SA1381		R39	1-215-469-00	METAL	100K 1% 1/6W
Q104	8-729-801-88	TRANSISTOR 2SA1381		R40	1-249-433-11	CARBON	22K 5% 1/4W
Q105	8-729-119-78	TRANSISTOR 2SC2785-HFE		R41	1-215-471-00	METAL	120K 1% 1/6W
Q106	8-729-140-50	TRANSISTOR 2SC3209LK		R42	1-249-433-11	CARBON	22K 5% 1/4W
Q107	8-729-801-88	TRANSISTOR 2SA1381		R43	1-249-405-11	CARBON	100 5% 1/4W
Q108	8-729-900-63	TRANSISTOR DTA124ES		R101	1-215-401-11	METAL	150 1% 1/6W
Q109	8-729-900-63	TRANSISTOR DTA124ES		R102	1-215-401-11	METAL	150 1% 1/6W
Q110	8-729-900-36	TRANSISTOR DTC124ES		R103	1-215-473-00	METAL	150K 1% 1/6W
Q111	8-729-105-74	TRANSISTOR 2SK523-M1		R105	1-215-469-00	METAL	100K 1% 1/6W
Q112	8-729-119-78	TRANSISTOR 2SC2785-HFE		R106	1-215-471-00	METAL	120K 1% 1/6W
Q113	8-729-119-78	TRANSISTOR 2SC2785-HFE		R107	1-249-421-11	CARBON	2.2K 5% 1/4W
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE		R108	1-249-403-11	CARBON	68 5% 1/4W F
Q202	8-729-140-50	TRANSISTOR 2SC3209LK		R109	1-215-429-00	METAL	2.2K 1% 1/6W
Q203	8-729-801-88	TRANSISTOR 2SA1381		R111	1-249-421-11	CARBON	2.2K 5% 1/4W
Q204	8-729-801-88	TRANSISTOR 2SA1381		R112	1-215-389-00	METAL	47 1% 1/6W
Q205	8-729-119-78	TRANSISTOR 2SC2785-HFE		R116	1-215-473-00	METAL	150K 1% 1/6W
Q206	8-729-140-50	TRANSISTOR 2SC3209LK		R117	1-249-421-11	CARBON	2.2K 5% 1/4W
Q207	8-729-801-88	TRANSISTOR 2SA1381		R118	1-249-427-11	CARBON	6.8K 5% 1/4W
Q208	8-729-900-63	TRANSISTOR DTA124ES		R119	1-215-453-00	METAL	22K 1% 1/6W
Q209	8-729-900-63	TRANSISTOR DTA124ES		R120	1-215-469-00	METAL	100K 1% 1/6W
Q210	8-729-900-36	TRANSISTOR DTC124ES		R121	1-215-471-00	METAL	120K 1% 1/6W
Q211	8-729-105-74	TRANSISTOR 2SK523-M1		R122	1-215-441-00	METAL	6.8K 1% 1/6W
Q212	8-729-119-78	TRANSISTOR 2SC2785-HFE		R123	1-215-481-00	METAL	330K 1% 1/6W
<RESISTOR>				R124	1-215-433-00	METAL	3.3K 1% 1/6W
R1	1-249-405-11	CARBON	100 5% 1/4W	R125	1-249-431-11	CARBON	15K 5% 1/4W
R2	1-215-437-00	METAL	4.7K 1% 1/6W	R126	1-249-431-11	CARBON	15K 5% 1/4W
R3	1-249-441-11	CARBON	100K 5% 1/4W	R127	1-249-415-11	CARBON	680 5% 1/4W
R4	1-215-449-00	METAL	15K 1% 1/6W	R128	1-249-405-11	CARBON	100 5% 1/4W
R5	1-249-405-11	CARBON	100 5% 1/4W	R129	1-249-421-11	CARBON	2.2K 5% 1/4W F
R6	1-249-438-11	CARBON	56K 5% 1/4W	R130	1-215-431-00	METAL	2.7K 1% 1/6W
R7	1-249-437-11	CARBON	47K 5% 1/4W	R131	1-202-549-00	SOLID	100 5% 1/2W
R8	1-249-405-11	CARBON	100 5% 1/4W	R132	1-202-818-00	SOLID	1K 10% 1/2W
R9	1-215-449-00	METAL	15K 1% 1/6W	R133	1-249-421-11	CARBON	2.2K 5% 1/4W F
R10	1-215-447-00	METAL	12K 1% 1/6W	R134	1-249-429-11	CARBON	10K 5% 1/4W
R11	1-249-405-11	CARBON	100 5% 1/4W	R135	1-215-469-00	METAL	100K 1% 1/6W
R12	1-249-405-11	CARBON	100 5% 1/4W	R136	1-202-549-00	SOLID	100 5% 1/2W
R13	1-249-441-11	CARBON	100K 5% 1/4W	R137	1-215-443-00	METAL	8.2K 1% 1/6W
R14	1-249-423-11	CARBON	3.3K 5% 1/4W	R138	1-215-435-00	METAL	3.9K 1% 1/6W
R15	1-249-397-11	CARBON	22 5% 1/4W F	R139	1-249-421-11	CARBON	2.2K 5% 1/4W
R16	1-249-405-11	CARBON	100 5% 1/4W	R140	1-215-453-00	METAL	22K 1% 1/6W
R17	1-249-423-11	CARBON	3.3K 5% 1/4W	R141	1-215-421-00	METAL	1K 1% 1/6W
R18	1-249-426-11	CARBON	5.6K 5% 1/4W	R142	1-249-417-11	CARBON	1K 5% 1/4W
R19	1-249-415-11	CARBON	680 5% 1/4W	R143	1-247-903-00	CARBON	1M 5% 1/4W
R20	1-249-397-11	CARBON	22 5% 1/4W F	R144	1-249-427-11	CARBON	6.8K 5% 1/4W
R21	1-249-413-11	CARBON	470 5% 1/4W	R145	1-249-405-11	CARBON	100 5% 1/4W
R22	1-215-453-00	METAL	22K 1% 1/6W	R146	1-247-895-00	CARBON	470K 5% 1/4W
R23	1-215-447-00	METAL	12K 1% 1/6W	R147	1-215-457-00	METAL	33K 1% 1/6W
R24	1-215-453-00	METAL	22K 1% 1/6W	R148	1-249-410-11	CARBON	270 5% 1/4W F
R25	1-215-457-00	METAL	33K 1% 1/6W	R201	1-215-401-11	METAL	150 1% 1/6W
R26	1-249-405-11	CARBON	100 5% 1/4W	R202	1-215-401-11	METAL	150 1% 1/6W
R27	1-249-405-11	CARBON	100 5% 1/4W	R203	1-215-461-00	METAL	47K 1% 1/6W
R28	1-215-431-00	METAL	2.7K 1% 1/6W	R204	1-215-469-00	METAL	100K 1% 1/6W
				R205	1-215-469-00	METAL	100K 1% 1/6W

CA(RG)

DM

DD

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R206	1-215-471-00	METAL	120K 1% 1/6W	*****			
R207	1-249-421-11	CARBON	2.2K 5% 1/4W	A-1341-218-A DD BOARD, COMPLETE			
R208	1-249-403-11	CARBON	68 5% 1/4W	*****			
R209	1-215-429-00	METAL	2.2K 1% 1/6W	1-247-895-00 CARBON 470K 5% 1/4W			
R211	1-249-421-11	CARBON	2.2K 5% 1/4W	*1-568-984-11 CONNECTOR, MALE 96P			
R212	1-215-389-00	METAL	47 1% 1/6W	<CAPACITOR>			
R216	1-215-473-00	METAL	150K 1% 1/6W	C1	1-124-499-11	ELECT 1MF	20% 50V
R217	1-249-421-11	CARBON	2.2K 5% 1/4W	C2	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R218	1-249-427-11	CARBON	6.8K 5% 1/4W	C3	1-123-875-11	ELECT 10MF	20% 50V
R219	1-215-453-00	METAL	22K 1% 1/6W	C4	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
R220	1-215-469-00	METAL	100K 1% 1/6W	C5	1-124-499-11	ELECT 1MF	20% 50V
R221	1-215-471-00	METAL	120K 1% 1/6W	C6	1-124-499-11	ELECT 1MF	20% 50V
R222	1-215-441-00	METAL	6.8K 1% 1/6W	C7	1-124-499-11	ELECT 1MF	20% 50V
R223	1-215-481-00	METAL	330K 1% 1/6W	C8	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
R224	1-215-433-00	METAL	3.3K 1% 1/6W	C9	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R225	1-249-431-11	CARBON	15K 5% 1/4W	C10	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R226	1-249-431-11	CARBON	15K 5% 1/4W	C11	1-124-925-11	ELECT 2.2MF	20% 50V
R227	1-249-415-11	CARBON	680 5% 1/4W	C12	1-123-875-11	ELECT 10MF	20% 50V
R228	1-249-405-11	CARBON	100 5% 1/4W	C13	1-124-499-11	ELECT 1MF	20% 50V
R229	1-249-421-11	CARBON	2.2K 5% 1/4W	C14	1-124-499-11	ELECT 1MF	20% 50V
R230	1-215-431-00	METAL	2.7K 1% 1/6W	C15	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R231	1-202-549-00	SOLID	100 5% 1/2W	C16	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
R232	1-202-818-00	SOLID	1K 10% 1/2W	C17	1-124-927-11	ELECT 4.7MF	20% 50V
R233	1-249-421-11	CARBON	2.2K 5% 1/4W	C18	1-123-875-11	ELECT 10MF	20% 50V
R234	1-215-469-00	METAL	100K 1% 1/6W	C19	1-124-120-11	ELECT 220MF	20% 16V
R235	1-249-429-11	CARBON	10K 5% 1/4W	C20	1-124-120-11	ELECT 220MF	20% 16V
R236	1-202-549-00	SOLID	100 5% 1/2W	C21	1-123-875-11	ELECT 10MF	20% 50V
R237	1-215-443-00	METAL	8.2K 1% 1/6W	C22	1-123-875-11	ELECT 10MF	20% 50V
R238	1-215-435-00	METAL	3.9K 1% 1/6W	C23	1-124-499-11	ELECT 1MF	20% 50V
R239	1-249-421-11	CARBON	2.2K 5% 1/4W	C24	1-123-875-11	ELECT 10MF	20% 50V
R240	1-215-453-00	METAL	22K 1% 1/6W	<IC>			
R241	1-215-421-00	METAL	1K 1% 1/6W	IC1	8-759-300-78	IC HD14538BFP	
R242	1-249-417-11	CARBON	1K 5% 1/4W	IC2	8-759-114-06	IC UPC814G2-1	
R243	1-247-903-00	CARBON	1M 5% 1/4W	IC3	8-752-033-65	IC CXA1158P	
R244	1-249-427-11	CARBON	6.8K 5% 1/4W	IC4	8-759-114-06	IC UPC814G2-1	
R245	1-249-405-11	CARBON	100 5% 1/4W	<COIL>			
R246	1-247-895-00	CARBON	470K 5% 1/4W	L1	1-459-155-00	COIL (WITH CORE) 45UH	
*****				L2	1-459-155-00	COIL (WITH CORE) 45UH	
*1-629-830-11	DM BOARD	*****		<TRANSISTOR>			
*1-506-348-99	PIN, CONNECTOR 4P			Q1	8-729-205-97	TRANSISTOR 2SC3668-Y	
*1-508-742-00	PIN, CONNECTOR 3P			Q2	8-729-205-95	TRANSISTOR 2SA1428Y	
*1-564-507-11	PLUG, CONNECTOR 4P			Q3	8-729-904-04	TRANSISTOR FMS2	
*1-564-509-11	PLUG, CONNECTOR 6P			Q4	8-729-904-04	TRANSISTOR FMS2	
*1-564-512-11	PLUG, CONNECTOR 9P			Q11	8-729-903-82	TRANSISTOR FMW2	
*1-564-514-11	PLUG, CONNECTOR 11P			Q12	8-729-920-59	TRANSISTOR IMX2	
*1-564-515-11	PLUG, CONNECTOR 12P			Q13	8-729-904-04	TRANSISTOR FMS2	
*1-564-516-11	PLUG, CONNECTOR 13P			Q14	8-729-903-10	TRANSISTOR FMW1	
*1-568-982-11	CONNECTOR, FEMALE 96P			Q15	8-729-920-59	TRANSISTOR IMX2	
*1-568-985-11	CONNECTOR, FEMALE 64P			Q16	8-729-902-96	TRANSISTOR FMS1	
<CAPACITOR>				Q17	8-729-902-96	TRANSISTOR FMS1	
C1	1-124-556-11	ELECT	2200MF 20% 16V	Q18	8-729-902-96	TRANSISTOR FMS1	
C2	1-124-556-11	ELECT	2200MF 20% 16V	Q19	8-729-903-82	TRANSISTOR FMW2	
<RESISTOR>				Q20	8-729-920-59	TRANSISTOR IMX2	
R1	1-215-908-00	METAL OXIDE	33 5% 3W F	Q21	8-729-903-10	TRANSISTOR FMW1	
R2	1-215-908-00	METAL OXIDE	33 5% 3W F				
R3	1-216-483-11	METAL OXIDE	2.7K 5% 3W F				
R4	1-216-483-11	METAL OXIDE	2.7K 5% 3W F				
R5	1-216-475-11	METAL OXIDE	120 5% 3W F				

DD

DE

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q22	8-729-904-04	TRANSISTOR FMS2		R66	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q23	8-729-920-59	TRANSISTOR IMX2		R67	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q24	8-729-902-96	TRANSISTOR FMS1		R68	1-216-037-00	METAL GLAZE 330 5%	1/10W
Q25	8-729-902-96	TRANSISTOR FMS1		R69	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q26	8-729-902-96	TRANSISTOR FMS1		R70	1-216-013-00	METAL GLAZE 33 5%	1/10W
Q27	8-729-903-82	TRANSISTOR FMW2		R71	1-216-013-00	METAL GLAZE 33 5%	1/10W
Q28	8-729-920-59	TRANSISTOR IMX2		R72	1-216-037-00	METAL GLAZE 330 5%	1/10W
Q29	8-729-903-10	TRANSISTOR FMW1		R73	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q30	8-729-904-04	TRANSISTOR FMS2		R74	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q31	8-729-920-59	TRANSISTOR IMX2		R75	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q32	8-729-902-96	TRANSISTOR FMS1		R76	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q33	8-729-902-96	TRANSISTOR FMS1		R77	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q34	8-729-902-96	TRANSISTOR FMS1		R78	1-216-037-00	METAL GLAZE 330 5%	1/10W
Q35	8-729-920-59	TRANSISTOR IMX2		R79	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q36	8-729-903-10	TRANSISTOR FMW1		R80	1-216-037-00	METAL GLAZE 330 5%	1/10W
Q37	8-729-903-10	TRANSISTOR FMW1		R81	1-216-041-00	METAL GLAZE 470 5%	1/10W
<RESISTOR>				R82	1-216-013-00	METAL GLAZE 33 5%	1/10W
R01	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W	R83	1-216-013-00	METAL GLAZE 33 5%	1/10W
R02	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R84	1-216-041-00	METAL GLAZE 470 5%	1/10W
R03	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R85	1-216-041-00	METAL GLAZE 470 5%	1/10W
R04	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R86	1-216-041-00	METAL GLAZE 470 5%	1/10W
R05	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R87	1-216-041-00	METAL GLAZE 470 5%	1/10W
R06	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R88	1-216-037-00	METAL GLAZE 330 5%	1/10W
R07	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R89	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R08	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R90	1-216-045-00	METAL GLAZE 680 5%	1/10W
R09	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R91	1-216-045-00	METAL GLAZE 680 5%	1/10W
R10	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R92	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R11	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R93	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R12	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R94	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R13	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R95	1-216-025-00	METAL GLAZE 100 5%	1/10W
R14	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R96	1-216-025-00	METAL GLAZE 100 5%	1/10W
R15	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R97	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R16	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R98	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R17	1-216-101-00	METAL GLAZE 150K 5%	1/10W	R99	1-216-041-00	METAL GLAZE 470 5%	1/10W
R18	1-216-748-11	METAL GLAZE 39K 5%	1/10W	R100	1-216-025-00	METAL GLAZE 100 5%	1/10W
R19	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R101	1-216-025-00	METAL GLAZE 100 5%	1/10W
R20	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R102	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R21	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R103	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R22	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R104	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R23	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R105	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R24	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R106	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R25	1-216-029-00	METAL GLAZE 150 5%	1/10W	R107	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R26	1-216-017-00	METAL GLAZE 47 5%	1/10W	R108	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R27	1-216-017-00	METAL GLAZE 47 5%	1/10W	R111	1-247-723-11	CARBON 6.8K 5%	1/4W
R28	1-216-049-00	METAL GLAZE 1K 5%	1/10W	*****			
R29	1-216-049-00	METAL GLAZE 1K 5%	1/10W	A-1341-219-A DE BOARD, COMPLETE			
R30	1-216-089-00	METAL GLAZE 47K 5%	1/10W	*****			
R51	1-216-073-00	METAL GLAZE 10K 5%	1/10W	*1-568-984-11 CONNECTOR, MALE 96P			
R52	1-216-073-00	METAL GLAZE 10K 5%	1/10W	<CAPACITOR>			
R53	1-216-073-00	METAL GLAZE 10K 5%	1/10W	C501	1-123-356-00	ELECT 10MF 20%	16V
R54	1-216-073-00	METAL GLAZE 10K 5%	1/10W	C502	1-123-356-00	ELECT 10MF 20%	16V
R55	1-216-025-00	METAL GLAZE 100 5%	1/10W	C503	1-123-356-00	ELECT 10MF 20%	16V
R56	1-216-025-00	METAL GLAZE 100 5%	1/10W	C504	1-123-356-00	ELECT 10MF 20%	16V
R57	1-216-025-00	METAL GLAZE 100 5%	1/10W	C505	1-123-356-00	ELECT 10MF 20%	16V
R58	1-216-037-00	METAL GLAZE 330 5%	1/10W	C506	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R59	1-216-041-00	METAL GLAZE 470 5%	1/10W	C507	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R60	1-216-037-00	METAL GLAZE 330 5%	1/10W	C508	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R61	1-216-041-00	METAL GLAZE 470 5%	1/10W	C509	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R62	1-216-013-00	METAL GLAZE 33 5%	1/10W	C510	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R63	1-216-013-00	METAL GLAZE 33 5%	1/10W				
R64	1-216-041-00	METAL GLAZE 470 5%	1/10W				
R65	1-216-041-00	METAL GLAZE 470 5%	1/10W				

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C511	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C575	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C512	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C576	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C513	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C577	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C514	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C578	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C515	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C579	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C516	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C580	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C517	1-164-232-11	CERAMIC CHIP 0.01MF	50V			<DIODE>	
C518	1-164-232-11	CERAMIC CHIP 0.01MF	50V	D501	8-719-900-95	DIODE V09G	
C519	1-164-232-11	CERAMIC CHIP 0.01MF	50V	D502	8-719-900-95	DIODE V09G	
		<CAPACITOR>				<IC>	
C521	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC501	8-759-304-94	IC HD74HC244FP	
C501	1-123-356-00	ELECT 10MF	20% 16V	IC502	8-759-304-94	IC HD74HC244FP	
C523	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC503	8-759-304-94	IC HD74HC244FP	
C524	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC504	8-759-304-94	IC HD74HC244FP	
C525	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC505	8-759-304-70	IC HD74HC138FP	
C526	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC506	8-759-304-70	IC HD74HC138FP	
C527	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC507	8-759-304-70	IC HD74HC138FP	
C528	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC508	8-759-304-70	IC HD74HC138FP	
C529	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC509	8-759-304-70	IC HD74HC138FP	
C530	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC510	8-759-995-64	IC MB86023	
C531	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC511	8-759-995-64	IC MB86023	
C532	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC512	8-759-995-64	IC MB86023	
C533	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC513	8-759-995-64	IC MB86023	
C534	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC514	8-759-995-64	IC MB86023	
C535	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC515	8-759-995-64	IC MB86023	
C536	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC516	8-759-995-64	IC MB86023	
C537	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC517	8-759-995-64	IC MB86023	
C538	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC518	8-759-995-64	IC MB86023	
C539	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC519	8-759-995-64	IC MB86023	
C540	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC520	8-759-995-64	IC MB86023	
C541	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC521	8-759-995-64	IC MB86023	
C542	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC522	8-759-995-64	IC MB86023	
C543	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC523	8-759-995-64	IC MB86023	
C544	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC524	8-759-995-64	IC MB86023	
C545	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC525	8-759-995-64	IC MB86023	
C546	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC526	8-759-995-64	IC MB86023	
C547	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC527	8-759-995-64	IC MB86023	
C548	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC528	8-759-995-64	IC MB86023	
C549	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC529	8-759-995-64	IC MB86023	
C550	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC530	8-759-995-64	IC MB86023	
C551	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC531	8-759-995-64	IC MB86023	
C552	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC532	8-759-995-64	IC MB86023	
C553	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC533	8-759-995-64	IC MB86023	
C554	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC534	8-759-995-64	IC MB86023	
C555	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC535	8-759-995-64	IC MB86023	
C556	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC536	8-759-995-64	IC MB86023	
C557	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC537	8-759-147-47	IC UPC-1093T	
C558	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC538	8-759-114-06	IC UPC814G2-1	
C559	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC539	8-759-114-06	IC UPC814G2-1	
C560	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC540	8-759-114-06	IC UPC814G2-1	
C561	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC541	8-759-114-06	IC UPC814G2-1	
C562	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC542	8-759-114-06	IC UPC814G2-1	
C563	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC543	8-759-114-06	IC UPC814G2-1	
C564	1-164-232-11	CERAMIC CHIP 0.01MF	50V			<COIL>	
C565	1-164-232-11	CERAMIC CHIP 0.01MF	50V	L501	1-459-155-00	COIL (WITH CORE) 45UH	
C566	1-164-232-11	CERAMIC CHIP 0.01MF	50V	L502	1-459-155-00	COIL (WITH CORE) 45UH	
C567	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C568	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C569	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C570	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C571	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C572	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C573	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C574	1-164-232-11	CERAMIC CHIP 0.01MF	50V				

DE

EB(R)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R626	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W	*A-1341-220-A	EB (R) BOARD, COMPLETE		
R627	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W		*****		
R628	1-216-627-11	METAL CHIP	100 0.50% 1/10W	*1-564-507-11	PLUG, CONNECTOR 4P		
R629	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W	*1-564-509-11	PLUG, CONNECTOR 6P		
R630	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W	*1-564-512-11	PLUG, CONNECTOR 9P		
R631	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W	*4-384-422-01	RETAINER (C), TR		
R632	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W	4-384-424-01	SHEET (B), INSULATING		
R633	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W				
R634	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W	*4-396-261-01	HOLDER (E), TR		
R635	1-216-627-11	METAL CHIP	100 0.50% 1/10W				
R636	1-216-679-11	METAL CHIP	15K 0.50% 1/10W		<CAPACITOR>		
R637	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	C101	1-124-122-11	ELECT 100MF	20% 50V
R638	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	C102	1-101-004-00	CERAMIC 0.01MF	50V
R639	1-216-627-11	METAL CHIP	100 0.50% 1/10W	C103	1-124-120-11	ELECT 220MF	20% 16V
R640	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	C104	1-124-122-11	ELECT 100MF	20% 50V
R641	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	C105	1-101-004-00	CERAMIC 0.01MF	50V
R642	1-216-679-11	METAL CHIP	15K 0.50% 1/10W				
R643	1-216-627-11	METAL CHIP	100 0.50% 1/10W	C106	1-124-120-11	ELECT 220MF	20% 16V
R644	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	C107	1-130-479-00	MYLAR 0.0047MF	5% 50V
R645	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	C108	1-102-002-00	CERAMIC 680PF	10% 500V
R646	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	C109	1-102-244-00	CERAMIC 220PF	10% 500V
R647	1-216-627-11	METAL CHIP	100 0.50% 1/10W	C110	1-126-101-11	ELECT 100MF	20% 16V
R648	1-216-679-11	METAL CHIP	15K 0.50% 1/10W				
R649	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	C111	1-101-004-00	CERAMIC 0.01MF	50V
R650	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	C112	1-126-101-11	ELECT 100MF	20% 16V
R651	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	C113	1-101-004-00	CERAMIC 0.01MF	50V
R652	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C114	1-102-002-00	CERAMIC 680PF	10% 500V
R653	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C115	1-102-947-00	CERAMIC 10PF	0.5PF 50V
R654	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W				
R655	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C116	1-126-233-11	ELECT 22MF	20% 50V
R656	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C117	1-126-233-11	ELECT 22MF	20% 50V
R657	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	C118	1-124-912-11	ELECT 330MF	20% 50V
R658	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C119	1-124-912-11	ELECT 330MF	20% 50V
R659	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C120	1-123-875-11	ELECT 10MF	20% 50V
R660	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W				
R661	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C121	1-123-875-11	ELECT 10MF	20% 50V
R662	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C122	1-130-479-00	MYLAR 0.0047MF	5% 50V
R663	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	C123	1-101-004-00	CERAMIC 0.01MF	50V
R664	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C124	1-101-004-00	CERAMIC 0.01MF	50V
R665	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C125	1-101-004-00	CERAMIC 0.01MF	50V
R666	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W				
R667	1-216-651-11	METAL CHIP	1K 0.50% 1/10W		<DIODE>		
R668	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	D101	8-719-911-19	DIODE 1SS119	
R669	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	D102	8-719-911-19	DIODE 1SS119	
R670	1-216-627-11	METAL CHIP	100 0.50% 1/10W	D103	8-719-911-19	DIODE 1SS119	
R671	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	D104	8-719-911-19	DIODE 1SS119	
R672	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	D105	8-719-109-85	DIODE RD5.1ES-B2	
R673	1-216-627-11	METAL CHIP	100 0.50% 1/10W				
R674	1-216-651-11	METAL CHIP	1K 0.50% 1/10W		<IC>		
R675	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	IC101	8-759-700-69	IC NJM79L12A	
R676	1-216-627-11	METAL CHIP	100 0.50% 1/10W	IC102	8-759-982-21	IC RC78L05A	
R677	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	IC103	8-759-109-82	IC UPC814C	
R678	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	IC104	8-759-945-58	IC RC4558P	
R679	1-216-627-11	METAL CHIP	100 0.50% 1/10W				
R680	1-216-651-11	METAL CHIP	1K 0.50% 1/10W		<COIL>		
R681	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	L101	1-459-155-00	COIL (WITH CORE) 45UH	
R682	1-216-627-11	METAL CHIP	100 0.50% 1/10W	L102	1-459-155-00	COIL (WITH CORE) 45UH	
R683	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	L103	1-410-645-31	INDUCTOR 100UH	
R684	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	L104	1-410-645-31	INDUCTOR 100UH	
R685	1-216-627-11	METAL CHIP	100 0.50% 1/10W				
R686	1-216-651-11	METAL CHIP	1K 0.50% 1/10W		<TRANSISTOR>		
				Q101	8-729-304-92	TRANSISTOR 2SB649A	
				Q102	8-729-304-92	TRANSISTOR 2SB649A	

EB(R)

EB(G)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q103	8-729-304-92	TRANSISTOR 2SB649A		C203	1-124-120-11	ELECT 220MF	20% 16V
Q104	8-729-306-92	TRANSISTOR 2SD669A		C204	1-124-122-11	ELECT 100MF	20% 50V
Q105	8-729-142-74	TRANSISTOR 2SD1977		C205	1-101-004-00	CERAMIC 0.01MF	50V
Q106	8-729-142-70	TRANSISTOR 2SB1315		C206	1-124-120-11	ELECT 220MF	20% 16V
Q107	8-729-900-80	TRANSISTOR DTC114ES		C207	1-130-479-00	MYLAR 0.0047MF	5% 50V
Q108	8-729-900-80	TRANSISTOR DTC114ES		C208	1-102-002-00	CERAMIC 680PF	10% 500V
Q109	8-729-119-78	TRANSISTOR 2SC2785-HFE		C209	1-102-244-00	CERAMIC 220PF	10% 500V
				C210	1-126-101-11	ELECT 100MF	20% 16V
<RESISTOR>				C211	1-101-004-00	CERAMIC 0.01MF	50V
R101	1-215-453-00	METAL 22K 1% 1/6W		C212	1-126-101-11	ELECT 100MF	20% 16V
R102	1-215-453-00	METAL 22K 1% 1/6W		C213	1-101-004-00	CERAMIC 0.01MF	50V
R103	1-215-461-00	METAL 47K 1% 1/6W		C214	1-102-002-00	CERAMIC 680PF	10% 500V
R104	1-215-445-00	METAL 10K 1% 1/6W		C215	1-102-947-00	CERAMIC 10PF	0.5PF 50V
R105	1-214-741-00	METAL 3.3K 1% 1/4W		C216	1-126-233-11	ELECT 22MF	20% 50V
R106	1-215-451-00	METAL 18K 1% 1/6W		C217	1-126-233-11	ELECT 22MF	20% 50V
R107	1-215-455-00	METAL 27K 1% 1/6W		C218	1-124-912-11	ELECT 330MF	20% 50V
R108	1-215-451-00	METAL 18K 1% 1/6W		C219	1-124-912-11	ELECT 330MF	20% 50V
R109	1-215-445-00	METAL 10K 1% 1/6W		C220	1-123-875-11	ELECT 10MF	20% 50V
R110	1-215-433-00	METAL 3.3K 1% 1/6W		C221	1-123-875-11	ELECT 10MF	20% 50V
R111	1-215-445-00	METAL 10K 1% 1/6W		C222	1-130-479-00	MYLAR 0.0047MF	5% 50V
R112	1-249-429-11	CARBON 10K 5% 1/4W		C223	1-101-004-00	CERAMIC 0.01MF	50V
R113	1-247-713-11	CARBON 1K 5% 1/4W		C224	1-101-004-00	CERAMIC 0.01MF	50V
R114	1-215-873-00	METAL OXIDE 4.7K 5% 1W	F	C225	1-101-004-00	CERAMIC 0.01MF	50V
R115	1-215-403-00	METAL 180 1% 1/6W		C226	1-101-004-00	CERAMIC 0.01MF	50V
R116	1-216-369-00	METAL OXIDE 1 5% 2W	F	<DIODE>			
R117	1-215-417-00	METAL 680 1% 1/6W		D201	8-719-911-19	DIODE 1SS119	
R118	1-215-445-00	METAL 10K 1% 1/6W		D202	8-719-911-19	DIODE 1SS119	
R119	1-215-393-00	METAL 68 1% 1/6W		D203	8-719-911-19	DIODE 1SS119	
R121	1-247-688-11	CARBON 10 5% 1/4W	F	D204	8-719-911-19	DIODE 1SS119	
R122	1-247-688-11	CARBON 10 5% 1/4W	F	D205	8-719-109-85	DIODE RD5.1ES-B2	
R123	1-249-397-11	CARBON 22 5% 1/4W	F	<IC>			
R124	1-249-397-11	CARBON 22 5% 1/4W	F	IC201	8-759-700-69	IC NJM79L12A	
R125	1-249-381-11	CARBON 1 5% 1/4W	F	IC202	8-759-982-21	IC RC78L05A	
R126	1-249-381-11	CARBON 1 5% 1/4W	F	IC203	8-759-109-82	IC UPC814C	
R127	1-215-888-00	METAL OXIDE 220 5% 2W	F	IC204	8-759-945-58	IC RC4558P	
R128	1-215-447-00	METAL 12K 1% 1/6W		<COIL>			
R129	1-215-421-00	METAL 1K 1% 1/6W		L201	1-459-155-00	COIL (WITH CORE) 45UH	
R130	1-249-469-11	CARBON 100K 5% 1/4W		L202	1-459-155-00	COIL (WITH CORE) 45UH	
R131	1-247-700-11	CARBON 100 5% 1/4W		L203	1-410-645-31	INDUCTOR 100UH	
R132	1-249-438-11	CARBON 56K 5% 1/4W		L204	1-410-645-31	INDUCTOR 100UH	
R133	1-249-437-11	CARBON 47K 5% 1/4W		<TRANSISTOR>			
R134	1-249-405-11	CARBON 100 5% 1/4W		Q201	8-729-304-92	TRANSISTOR 2SB649A	
R135	1-249-429-11	CARBON 10K 5% 1/4W		Q202	8-729-304-92	TRANSISTOR 2SB649A	
R136	1-215-447-00	METAL 12K 1% 1/6W		Q203	8-729-304-92	TRANSISTOR 2SB649A	
R137	1-215-415-00	METAL 560 1% 1/6W		Q204	8-729-306-92	TRANSISTOR 2SD669A	
R138	1-215-421-00	METAL 1K 1% 1/6W		Q205	8-729-142-74	TRANSISTOR 2SD1977	
R139	1-215-451-00	METAL 18K 1% 1/6W		Q206	8-729-142-70	TRANSISTOR 2SB1315	
*****				Q207	8-729-900-80	TRANSISTOR DTC114ES	
*A-1341-221-A EB (G) BOARD, COMPLETE				Q208	8-729-900-80	TRANSISTOR DTC114ES	
*****				Q209	8-729-119-78	TRANSISTOR 2SC2785-HFE	
*1-564-507-11 PLUG, CONNECTOR 4P				<RESISTOR>			
*1-564-509-11 PLUG, CONNECTOR 6P				R201	1-215-453-00	METAL 22K 1% 1/6W	
*1-564-512-11 PLUG, CONNECTOR 9P				R202	1-215-453-00	METAL 22K 1% 1/6W	
*4-384-422-01 RETAINER (C), TR				R203	1-215-461-00	METAL 47K 1% 1/6W	
4-384-424-01 SHEET (B), INSULATING				R204	1-215-445-00	METAL 10K 1% 1/6W	
*4-396-261-01 HOLDER (E), TR				<CAPACITOR>			
<CAPACITOR>				C201	1-124-122-11	ELECT 100MF	20% 50V
C201	1-124-122-11	ELECT 100MF	20% 50V	C202	1-101-004-00	CERAMIC 0.01MF	50V

—283—

EB(B)

DA

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R319	1-215-393-00	METAL	68 1% 1/6W	C37	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R321	1-247-688-11	CARBON	10 5% 1/4W	C38	1-123-875-11	ELECT 10MF	20% 50V
R322	1-247-688-11	CARBON	10 5% 1/4W	C39	1-124-499-11	ELECT 1MF	20% 50V
R323	1-249-397-11	CARBON	22 5% 1/4W	C40	1-124-499-11	ELECT 1MF	20% 50V
R324	1-249-397-11	CARBON	22 5% 1/4W	C41	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
R325	1-249-381-11	CARBON	1 5% 1/4W	C42	1-124-927-11	ELECT 4.7MF	20% 50V
R326	1-249-381-11	CARBON	1 5% 1/4W	C43	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
R327	1-215-888-00	METAL OXIDE	220 5% 2W	C44	1-130-471-00	MYLAR 0.001MF	5% 50V
R328	1-215-447-00	METAL	12K 1% 1/6W	C45	1-123-875-11	ELECT 10MF	20% 50V
R329	1-215-421-00	METAL	1K 1% 1/6W	C46	1-124-925-11	ELECT 2.2MF	20% 50V
R330	1-249-469-11	CARBON	100K 5% 1/4W	C47	1-123-875-11	ELECT 10MF	20% 50V
R331	1-247-700-11	CARBON	100 5% 1/4W	C48	1-124-925-11	ELECT 2.2MF	20% 50V
R332	1-249-438-11	CARBON	56K 5% 1/4W	C49	1-136-153-00	FILM 0.01MF	5% 50V
R333	1-249-437-11	CARBON	47K 5% 1/4W	C50	1-123-875-11	ELECT 10MF	20% 50V
R334	1-249-405-11	CARBON	100 5% 1/4W	C53	1-123-875-11	ELECT 10MF	20% 50V
R335	1-249-429-11	CARBON	10K 5% 1/4W	C54	1-124-927-11	ELECT 4.7MF	20% 50V
R336	1-215-447-00	METAL	12K 1% 1/6W	C55	1-130-471-00	MYLAR 0.001MF	5% 50V
R337	1-215-415-00	METAL	560 1% 1/6W	C56	1-130-471-00	FILM 0.001MF	5% 50V
R338	1-215-421-00	METAL	1K 1% 1/6W	C57	1-136-165-00	FILM 0.1MF	5% 50V
R339	1-215-451-00	METAL	18K 1% 1/6W	C58	1-124-119-00	ELECT 330MF	20% 16V
*****				C59	1-124-120-11	ELECT 220MF	20% 16V
*A-1345-875-A DA BOARD, COMPLETE				C60	1-124-925-11	ELECT 2.2MF	20% 50V
*****				C61	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*1-568-984-11 CONNECTOR, MALE 96P				C62	1-124-925-11	ELECT 2.2MF	20% 50V
<CAPACITOR>				C63	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C1	1-123-875-11	ELECT 10MF	20% 50V	C71	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C2	1-126-101-11	ELECT 100MF	20% 16V	C72	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C3	1-123-875-11	ELECT 10MF	20% 50V	C73	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C4	1-126-101-11	ELECT 100MF	20% 16V	C74	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C5	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C75	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C6	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C76	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C7	1-124-499-11	ELECT 1MF	20% 50V	C79	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C8	1-136-153-00	FILM 0.01MF	5% 50V	C81	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C9	1-124-499-11	ELECT 1MF	20% 50V	C82	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C10	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C83	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C11	1-123-875-11	ELECT 10MF	20% 50V	C84	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C12	1-124-499-11	ELECT 1MF	20% 50V	C85	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C13	1-136-153-00	FILM 0.01MF	5% 50V	C86	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C14	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C87	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C15	1-123-875-11	ELECT 10MF	20% 50V	C88	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C16	1-124-499-11	ELECT 1MF	20% 50V	C89	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C17	1-136-153-00	FILM 0.01MF	5% 50V	C90	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C18	1-124-925-11	ELECT 2.2MF	20% 50V	C91	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C19	1-124-499-11	ELECT 1MF	20% 50V	C92	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C20	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C93	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C21	1-123-875-11	ELECT 10MF	20% 50V	C94	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C22	1-124-499-11	ELECT 1MF	20% 50V	C95	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C23	1-136-153-00	FILM 0.01MF	5% 50V	C156	1-123-875-11	ELECT 10MF	20% 50V
C24	1-124-925-11	ELECT 2.2MF	20% 50V	C158	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C25	1-124-499-11	ELECT 1MF	20% 50V	C201	1-123-875-11	ELECT 10MF	20% 50V
C26	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C202	1-136-153-00	FILM 0.01MF	5% 50V
C28	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C203	1-136-165-00	FILM 0.1MF	5% 50V
C29	1-123-875-11	ELECT 10MF	20% 50V	C204	1-124-927-11	ELECT 4.7MF	20% 50V
C30	1-124-499-11	ELECT 1MF	20% 50V	C205	1-124-499-11	ELECT 1MF	20% 50V
C31	1-123-875-11	ELECT 10MF	20% 50V	C206	1-124-499-11	ELECT 1MF	20% 50V
C32	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C207	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C33	1-123-875-11	ELECT 10MF	20% 50V	C208	1-124-499-11	ELECT 1MF	20% 50V
C34	1-124-499-11	ELECT 1MF	20% 50V	C209	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C35	1-124-477-11	ELECT 47MF	20% 16V	C210	1-123-875-11	ELECT 10MF	20% 50V
C36	1-124-499-11	ELECT 1MF	20% 50V	C211	1-124-477-11	ELECT 47MF	20% 16V
				C212	1-126-233-11	ELECT 22MF	20% 50V
				C213	1-124-925-11	ELECT 2.2MF	20% 50V
				C214	1-164-232-11	CERAMIC CHIP 0.01MF	50V
				C215	1-124-925-11	ELECT 2.2MF	20% 50V

DA

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C216	1-164-232-11	CERAMIC CHIP 0.01MF	50V	D206	8-719-400-18	DIODE MA152WK	
C217	1-123-875-11	ELECT 10MF	20% 50V	D207	8-719-400-18	DIODE MA152WK	
C218	1-124-927-11	ELECT 4.7MF	20% 50V	D208	8-719-400-18	DIODE MA152WK	
C219	1-124-925-11	ELECT 2.2MF	20% 50V				
C220	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C221	1-124-925-11	ELECT 2.2MF	20% 50V			<IC>	
C222	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC1	8-759-604-39	IC M5F78M12	
C223	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	IC2	8-759-700-69	IC NJM79L12A	
C224	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	IC3	8-759-300-78	IC HD14538BFP	
C231	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC4	8-759-100-96	IC UPC4558G2	
C232	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC5	8-759-300-78	IC HD14538BFP	
C233	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC6	8-759-100-96	IC UPC4558G2	
C234	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC8	8-759-100-93	IC UPC393G2	
C235	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC9	8-759-300-78	IC HD14538BFP	
C236	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC10	8-759-114-06	IC UPC814G2-1	
C237	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC11	8-759-300-78	IC HD14538BFP	
C238	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC12	8-759-114-06	IC UPC814G2-1	
C239	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC13	8-759-300-78	IC HD14538BFP	
C240	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC14	8-749-920-80	IC SBX4011-01	
C241	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC15	8-759-100-96	IC UPC4558G2	
C242	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC16	8-759-114-06	IC UPC814G2-1	
C243	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC17	8-759-300-71	IC HD14053BFP	
C244	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC201	8-752-033-65	IC CXA1158P	
C245	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC202	8-759-304-42	IC HD74HC04FP	
C246	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC203	8-759-114-06	IC UPC814G2-1	
C247	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC204	8-759-114-06	IC UPC814G2-1	
C248	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC205	8-759-114-06	IC UPC814G2-1	
C249	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC206	8-759-114-06	IC UPC814G2-1	
C252	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC207	8-759-114-06	IC UPC814G2-1	
C253	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC208	8-759-100-96	IC UPC4558G2	
C254	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC209	8-759-100-96	IC UPC4558G2	
C255	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC210	8-759-300-71	IC HD14053BFP	
C256	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC211	8-759-100-96	IC UPC4558G2	
C257	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC213	8-759-114-06	IC UPC814G2-1	
C258	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC214	8-759-114-06	IC UPC814G2-1	
C259	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC215	8-759-114-06	IC UPC814G2-1	
C260	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC217	8-759-114-06	IC UPC814G2-1	
C261	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC218	8-759-300-71	IC HD14053BFP	
C262	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC219	8-759-114-06	IC UPC814G2-1	
C263	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC220	8-759-114-06	IC UPC814G2-1	
C264	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC221	8-759-304-70	IC HD74HC138FP	
C265	1-164-232-11	CERAMIC CHIP 0.01MF	50V	IC401	8-759-100-93	IC UPC393G2	
C266	1-164-232-11	CERAMIC CHIP 0.01MF	50V			<COIL>	
C401	1-126-101-11	ELECT 100MF	20% 16V	L1	1-459-155-00	COIL (WITH CORE) 45UH	
C402	1-126-101-11	ELECT 100MF	20% 16V	L2	1-459-155-00	COIL (WITH CORE) 45UH	
C403	1-123-875-11	ELECT 10MF	20% 50V	L401	1-459-155-00	COIL (WITH CORE) 45UH	
C405	1-123-875-11	ELECT 10MF	20% 50V	L402	1-459-155-00	COIL (WITH CORE) 45UH	
		<DIODE>				<TRANSISTOR>	
D1	8-719-900-95	DIODE V09G		Q1	8-729-271-23	TRANSISTOR 2SC2712	
D2	8-719-900-95	DIODE V09G		Q2	8-729-230-46	TRANSISTOR 2SA1162-YG	
D3	8-719-400-18	DIODE MA152WK		Q3	8-729-271-23	TRANSISTOR 2SC2712	
D4	8-719-400-18	DIODE MA152WK		Q4	8-729-230-46	TRANSISTOR 2SA1162-YG	
D5	8-719-938-28	DIODE ERA22-06		Q5	8-729-230-46	TRANSISTOR 2SA1162-YG	
D6	8-719-106-71	DIODE RD12M-B2		Q6	8-729-230-46	TRANSISTOR 2SA1162-YG	
D7	8-719-106-53	DIODE RD10M-B2		Q7	8-729-230-46	TRANSISTOR 2SA1162-YG	
D8	8-719-400-18	DIODE MA152WK		Q8	8-729-230-46	TRANSISTOR 2SA1162-YG	
D9	8-719-104-34	DIODE IS2836		Q9	8-729-271-23	TRANSISTOR 2SC2712	
D201	8-719-800-76	DIODE ISS226		Q10	8-729-271-23	TRANSISTOR 2SC2712	
D202	8-719-400-18	DIODE MA152WK		Q11	8-729-105-72	TRANSISTOR 2SK523-L1	
D203	8-719-400-18	DIODE MA152WK					
D204	8-719-400-18	DIODE MA152WK					
D205	8-719-800-76	DIODE ISS226					

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
Q12	8-729-230-46	TRANSISTOR 2SA1162-YG		R9	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q13	8-729-230-46	TRANSISTOR 2SA1162-YG		R10	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q14	8-729-271-23	TRANSISTOR 2SC2712		R11	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
Q15	8-729-271-23	TRANSISTOR 2SC2712		R12	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q16	8-729-271-23	TRANSISTOR 2SC2712		R13	1-216-077-00	METAL GLAZE 15K 5%	1/10W
Q17	8-729-903-82	TRANSISTOR FMW2		R14	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q18	8-729-920-59	TRANSISTOR IMX2		R15	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q19	8-729-904-04	TRANSISTOR FMS2		R16	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q20	8-729-903-10	TRANSISTOR FMW1		R17	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q21	8-729-903-10	TRANSISTOR FMW1		R18	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q22	8-729-920-59	TRANSISTOR IMX2		R19	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q23	8-729-271-23	TRANSISTOR 2SC2712		R20	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q24	8-729-230-46	TRANSISTOR 2SA1162-YG		R21	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
Q25	8-729-901-01	TRANSISTOR DTC144EK		R22	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q26	8-729-901-01	TRANSISTOR DTC144EK		R23	1-216-077-00	METAL GLAZE 15K 5%	1/10W
Q27	8-729-901-01	TRANSISTOR DTC144EK		R24	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q28	8-729-271-23	TRANSISTOR 2SC2712		R25	1-216-097-00	METAL GLAZE 100K 5%	1/10W
Q29	8-729-901-01	TRANSISTOR DTC144EK		R26	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q30	8-729-901-01	TRANSISTOR DTC144EK		R29	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q31	8-729-903-10	TRANSISTOR FMW1		R30	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
Q201	8-729-271-23	TRANSISTOR 2SC2712		R31	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q202	8-729-271-23	TRANSISTOR 2SC2712		R32	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
Q203	8-729-271-23	TRANSISTOR 2SC2712		R33	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q204	8-729-271-23	TRANSISTOR 2SC2712		R34	1-216-077-00	METAL GLAZE 15K 5%	1/10W
Q205	8-729-903-82	TRANSISTOR FMW2		R35	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q206	8-729-920-59	TRANSISTOR IMX2		R36	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q207	8-729-904-04	TRANSISTOR FMS2		R39	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q208	8-729-903-10	TRANSISTOR FMW1		R41	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q209	8-729-903-10	TRANSISTOR FMW1		R42	1-216-673-11	METAL CHIP 8.2K 0.50%	1/10W
Q210	8-729-920-59	TRANSISTOR IMX2		R43	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q211	8-729-271-23	TRANSISTOR 2SC2712		R46	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q212	8-729-230-46	TRANSISTOR 2SA1162-YG		R47	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q213	8-729-903-82	TRANSISTOR FMW2		R49	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q214	8-729-920-59	TRANSISTOR IMX2		R50	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
Q215	8-729-904-04	TRANSISTOR FMS2		R51	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q216	8-729-903-10	TRANSISTOR FMW1		R52	1-216-077-00	METAL GLAZE 15K 5%	1/10W
Q217	8-729-903-10	TRANSISTOR FMW1		R53	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q218	8-729-920-59	TRANSISTOR IMX2		R54	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q219	8-729-271-23	TRANSISTOR 2SC2712		R55	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q220	8-729-230-46	TRANSISTOR 2SA1162-YG		R56	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q221	8-729-271-23	TRANSISTOR 2SC2712		R57	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
Q222	8-729-902-96	TRANSISTOR FMS1		R58	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q223	8-729-271-23	TRANSISTOR 2SC2712		R59	1-216-077-00	METAL GLAZE 15K 5%	1/10W
Q224	8-729-902-96	TRANSISTOR FMS1		R60	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q225	8-729-271-23	TRANSISTOR 2SC2712		R61	1-216-667-11	METAL CHIP 4.7K 0.50%	1/10W
Q226	8-729-903-10	TRANSISTOR FMW1		R62	1-216-669-11	METAL CHIP 5.6K 0.50%	1/10W
Q227	8-729-230-46	TRANSISTOR 2SA1162-YG		R63	1-216-099-00	METAL GLAZE 120K 5%	1/10W
Q228	8-729-903-10	TRANSISTOR FMW1		R64	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q229	8-729-230-46	TRANSISTOR 2SA1162-YG		R65	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q230	8-729-230-46	TRANSISTOR 2SA1162-YG		R66	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q231	8-729-230-46	TRANSISTOR 2SA1162-YG		R67	1-216-077-00	METAL GLAZE 15K 5%	1/10W
Q401	8-729-205-97	TRANSISTOR 2SC3668-Y		R68	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q402	8-729-205-95	TRANSISTOR 2SA1428Y		R69	1-216-073-00	METAL GLAZE 10K 5%	1/10W
<RESISTOR>				R70	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R71	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R2	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W	R72	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R3	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R73	1-216-033-00	METAL GLAZE 220 5%	1/10W
R4	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R74	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R5	1-216-683-11	METAL CHIP 22K 0.50%	1/10W	R75	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R6	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R76	1-216-025-00	METAL GLAZE 100 5%	1/10W
R7	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R77	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R8	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R78	1-216-073-00	METAL GLAZE 10K 5%	1/10W
				R79	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R80	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R145	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R81	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R146	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R82	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R147	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R83	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R148	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R84	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R150	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R85	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R151	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R86	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R152	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R87	1-216-101-00	METAL GLAZE	150K 5% 1/10W	R153	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R88	1-216-095-00	METAL GLAZE	82K 5% 1/10W	R154	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R89	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R155	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R90	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R156	1-216-025-00	METAL GLAZE	100 5% 1/10W
R91	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R157	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R92	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R158	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R93	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R159	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R94	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R160	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R95	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R161	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R96	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R163	1-216-679-11	METAL CHIP	15K 0.50% 1/10W
R97	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R164	1-216-655-11	METAL CHIP	1.5K 0.50% 1/10W
R99	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R165	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R100	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R168	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R101	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R169	1-216-033-00	METAL GLAZE	220 5% 1/10W
R102	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R170	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R103	1-216-101-00	METAL GLAZE	150K 5% 1/10W	R171	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R104	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R199	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R105	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R201	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R106	1-216-033-00	METAL GLAZE	220 5% 1/10W	R203	1-216-025-00	METAL GLAZE	100 5% 1/10W
R107	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W	R204	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R108	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	R205	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R109	1-216-673-11	METAL CHIP	8.2K 0.50% 1/10W	R206	1-216-699-11	METAL CHIP	100K 0.50% 1/10W
R110	1-216-025-00	METAL GLAZE	100 5% 1/10W	R207	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R111	1-216-025-00	METAL GLAZE	100 5% 1/10W	R208	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R112	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R209	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R113	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R210	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R114	1-216-033-00	METAL GLAZE	220 5% 1/10W	R211	1-216-025-00	METAL GLAZE	100 5% 1/10W
R115	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R212	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R116	1-216-047-00	METAL GLAZE	820 5% 1/10W	R213	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R117	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R214	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R118	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R215	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R119	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W	R216	1-216-025-00	METAL GLAZE	100 5% 1/10W
R120	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R217	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R121	1-216-748-11	METAL GLAZE	39K 5% 1/10W	R218	1-216-025-00	METAL GLAZE	100 5% 1/10W
R122	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R219	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R123	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R220	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R124	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R221	1-216-699-11	METAL CHIP	100K 0.50% 1/10W
R125	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R222	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R126	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R223	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R127	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R224	1-216-093-00	METAL GLAZE	68K 5% 1/10W
R128	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R225	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R129	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R226	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R130	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R227	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R131	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R228	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R132	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R229	1-216-025-00	METAL GLAZE	100 5% 1/10W
R133	1-216-037-00	METAL GLAZE	330 5% 1/10W	R230	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R134	1-216-037-00	METAL GLAZE	330 5% 1/10W	R231	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R135	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R232	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R136	1-216-748-11	METAL GLAZE	39K 5% 1/10W	R233	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R137	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R234	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R138	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R235	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R139	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R236	1-216-025-00	METAL GLAZE	100 5% 1/10W
R140	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R237	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R141	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R238	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R142	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R239	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R143	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R240	1-216-025-00	METAL GLAZE	100 5% 1/10W
R144	1-216-073-00	METAL GLAZE	10K 5% 1/10W				

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R241	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R305	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R242	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	R306	1-216-025-00	METAL GLAZE	100 5% 1/10W
R243	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R307	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R244	1-216-025-00	METAL GLAZE	100 5% 1/10W	R308	1-216-025-00	METAL GLAZE	100 5% 1/10W
R245	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R309	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R246	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	R310	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R247	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R311	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R248	1-216-025-00	METAL GLAZE	100 5% 1/10W	R312	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R249	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R313	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R250	1-216-641-11	METAL CHIP	390 0.50% 1/10W	R314	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R251	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R315	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R252	1-216-025-00	METAL GLAZE	100 5% 1/10W	R316	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R253	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R317	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R254	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R318	1-216-639-11	METAL CHIP	330 0.50% 1/10W
R255	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R319	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R256	1-216-025-00	METAL GLAZE	100 5% 1/10W	R320	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R257	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R321	1-216-639-11	METAL CHIP	330 0.50% 1/10W
R258	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R322	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R259	1-216-675-11	METAL CHIP	10K 0.50% 1/10W	R323	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R260	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R324	1-216-615-11	METAL CHIP	33 0.50% 1/10W
R261	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R325	1-216-615-11	METAL CHIP	33 0.50% 1/10W
R262	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R326	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R263	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R327	1-216-639-11	METAL CHIP	330 0.50% 1/10W
R264	1-216-675-11	METAL CHIP	10K 0.50% 1/10W	R328	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R265	1-216-675-11	METAL CHIP	10K 0.50% 1/10W	R329	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R266	1-216-691-11	METAL CHIP	47K 0.50% 1/10W	R330	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R267	1-216-691-11	METAL CHIP	47K 0.50% 1/10W	R331	1-216-661-11	METAL CHIP	2.7K 0.50% 1/10W
R268	1-216-691-11	METAL CHIP	47K 0.50% 1/10W	R332	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R269	1-216-691-11	METAL CHIP	47K 0.50% 1/10W	R333	1-216-655-11	METAL CHIP	1.5K 0.50% 1/10W
R270	1-216-639-11	METAL CHIP	330 0.50% 1/10W	R334	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R271	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W	R335	1-216-025-00	METAL GLAZE	100 5% 1/10W
R272	1-216-627-11	METAL CHIP	100 0.50% 1/10W	R336	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R273	1-216-639-11	METAL CHIP	330 0.50% 1/10W	R337	1-216-025-00	METAL GLAZE	100 5% 1/10W
R274	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R338	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R275	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R339	1-216-697-11	METAL CHIP	82K 0.50% 1/10W
R276	1-216-615-11	METAL CHIP	33 0.50% 1/10W	R340	1-216-687-11	METAL CHIP	33K 0.50% 1/10W
R277	1-216-615-11	METAL CHIP	33 0.50% 1/10W	R341	1-216-675-11	METAL CHIP	10K 0.50% 1/10W
R278	1-216-627-11	METAL CHIP	100 0.50% 1/10W	R342	1-216-675-11	METAL CHIP	10K 0.50% 1/10W
R279	1-216-639-11	METAL CHIP	330 0.50% 1/10W	R343	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R280	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R344	1-216-697-11	METAL CHIP	82K 0.50% 1/10W
R281	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R345	1-216-687-11	METAL CHIP	33K 0.50% 1/10W
R282	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R346	1-216-675-11	METAL CHIP	10K 0.50% 1/10W
R283	1-216-661-11	METAL CHIP	2.7K 0.50% 1/10W	R347	1-216-675-11	METAL CHIP	10K 0.50% 1/10W
R284	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R348	1-216-025-00	METAL GLAZE	100 5% 1/10W
R285	1-216-655-11	METAL CHIP	1.5K 0.50% 1/10W	R349	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R286	1-216-675-11	METAL CHIP	10K 0.50% 1/10W	R350	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R287	1-216-025-00	METAL GLAZE	100 5% 1/10W	R351	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R288	1-216-675-11	METAL CHIP	10K 0.50% 1/10W	R352	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R289	1-216-675-11	METAL CHIP	10K 0.50% 1/10W	R353	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R290	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W	R354	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R291	1-216-025-00	METAL GLAZE	100 5% 1/10W	R355	1-216-025-00	METAL GLAZE	100 5% 1/10W
R292	1-216-025-00	METAL GLAZE	100 5% 1/10W	R356	1-216-025-00	METAL GLAZE	100 5% 1/10W
R293	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R357	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R294	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R358	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R295	1-216-025-00	METAL GLAZE	100 5% 1/10W	R359	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R296	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R360	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R297	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R361	1-216-025-00	METAL GLAZE	100 5% 1/10W
R298	1-216-025-00	METAL GLAZE	100 5% 1/10W	R362	1-216-025-00	METAL GLAZE	100 5% 1/10W
R299	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R363	1-216-025-00	METAL GLAZE	100 5% 1/10W
R300	1-216-025-00	METAL GLAZE	100 5% 1/10W	R364	1-216-025-00	METAL GLAZE	100 5% 1/10W
R301	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R365	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R302	1-216-025-00	METAL GLAZE	100 5% 1/10W	R366	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R303	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R367	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
R304	1-216-025-00	METAL GLAZE	100 5% 1/10W	R368	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W

DA

DB

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R369	1-216-659-11	METAL CHIP 2.2K 0.50% 1/10W		C522	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R370	1-216-025-00	METAL GLAZE 100 5% 1/10W		C523	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R401	1-216-017-00	METAL GLAZE 47 5% 1/10W		C524	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R402	1-216-017-00	METAL GLAZE 47 5% 1/10W		C525	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R403	1-216-685-11	METAL CHIP 27K 0.50% 1/10W		C526	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R404	1-216-693-11	METAL CHIP 56K 0.50% 1/10W		C527	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R405	1-216-677-11	METAL CHIP 12K 0.50% 1/10W		C528	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R406	1-216-675-11	METAL CHIP 10K 0.50% 1/10W		C529	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R407	1-216-049-00	METAL GLAZE 1K 5% 1/10W		C530	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R408	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		C531	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R409	1-216-073-00	METAL GLAZE 10K 5% 1/10W		C532	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R410	1-216-679-11	METAL CHIP 15K 0.50% 1/10W		C533	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R411	1-216-693-11	METAL CHIP 56K 0.50% 1/10W		C534	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R412	1-216-677-11	METAL CHIP 12K 0.50% 1/10W		C535	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R413	1-216-675-11	METAL CHIP 10K 0.50% 1/10W		C536	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R414	1-216-049-00	METAL GLAZE 1K 5% 1/10W		C537	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R415	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		C538	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R416	1-216-073-00	METAL GLAZE 10K 5% 1/10W		C539	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R417	1-216-651-11	METAL CHIP 1K 0.50% 1/10W		C540	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R418	1-216-651-11	METAL CHIP 1K 0.50% 1/10W		C541	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R419	1-216-651-11	METAL CHIP 1K 0.50% 1/10W		C542	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R420	1-216-049-00	METAL GLAZE 1K 5% 1/10W		C543	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R421	1-216-049-00	METAL GLAZE 1K 5% 1/10W		C544	1-164-232-11	CERAMIC CHIP 0.01MF	50V
				C545	1-164-232-11	CERAMIC CHIP 0.01MF	50V
<VARIABLE RESISTOR>				C546	1-164-232-11	CERAMIC CHIP 0.01MF	50V
RV1	1-237-502-21	RES, ADJ, CERMET 5K		C547	1-164-232-11	CERAMIC CHIP 0.01MF	50V
RV2	1-237-503-21	RES, ADJ, CERMET 10K		C548	1-164-232-11	CERAMIC CHIP 0.01MF	50V
RV3	1-237-502-21	RES, ADJ, CERMET 5K		C549	1-164-232-11	CERAMIC CHIP 0.01MF	50V
				C550	1-164-232-11	CERAMIC CHIP 0.01MF	50V
<SWITCH>				C551	1-164-232-11	CERAMIC CHIP 0.01MF	50V
S1	1-570-204-21	SWITCH, KEY BOARD		C552	1-164-232-11	CERAMIC CHIP 0.01MF	50V
S2	1-570-204-21	SWITCH, KEY BOARD		C553	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C554	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C555	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C556	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C557	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C558	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C559	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C560	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C561	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C562	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C563	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C564	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C565	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C566	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C567	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C568	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C569	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C570	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C571	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C572	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C573	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C574	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C575	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C577	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C578	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C580	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C581	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				<DIODE>			
*****				D501	8-719-900-95	DIODE V09G	
*****				D502	8-719-900-95	DIODE V09G	
*****				D503	8-719-800-76	DIODE 1SS226	
C501	1-123-356-00	ELECT 10MF 20% 16V					
C502	1-123-356-00	ELECT 10MF 20% 16V					
C503	1-123-356-00	ELECT 10MF 20% 16V					
C504	1-123-356-00	ELECT 10MF 20% 16V					
C505	1-123-356-00	ELECT 10MF 20% 16V					
C506	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C507	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C508	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C509	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C510	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C511	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C512	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C513	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C514	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C515	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C516	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C517	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C518	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C519	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C520	1-164-232-11	CERAMIC CHIP 0.01MF	50V				
C521	1-164-232-11	CERAMIC CHIP 0.01MF	50V				

REF. NO.	PART NO.	DESCRIPTION
D504	8-719-800-76	DIODE 1SS226
D505	8-719-800-76	DIODE 1SS226
D506	8-719-800-76	DIODE 1SS226
D507	8-719-800-76	DIODE 1SS226
D508	8-719-800-76	DIODE 1SS226
<IC>		
IC501	8-759-926-48	SN74HC244NS
IC502	8-759-926-48	SN74HC244NS
IC503	8-759-926-48	SN74HC244NS
IC504	8-759-926-48	SN74HC244NS
IC505	8-759-304-70	IC HD74HC138FP
IC506	8-759-304-70	IC HD74HC138FP
IC507	8-759-304-70	IC HD74HC138FP
IC508	8-759-304-70	IC HD74HC138FP
IC509	8-759-304-70	IC HD74HC138FP
IC510	8-759-304-70	IC HD74HC138FP
IC511	8-759-995-64	IC MB86023
IC512	8-759-995-64	IC MB86023
IC513	8-759-995-64	IC MB86023
IC514	8-759-995-64	IC MB86023
IC515	8-759-995-64	IC MB86023
IC516	8-759-995-64	IC MB86023
IC517	8-759-995-64	IC MB86023
IC518	8-759-995-64	IC MB86023
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IC530	8-759-995-64	IC MB86023
IC531	8-759-995-64	IC MB86023
IC532	8-759-995-64	IC MB86023
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IC534	8-759-995-64	IC MB86023
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IC539	8-759-995-64	IC MB86023
IC540	8-759-995-64	IC MB86023
IC541	8-759-995-64	IC MB86023
IC542	8-759-995-64	IC MB86023
IC543	8-759-995-64	IC MB86023
IC544	8-759-995-64	IC MB86023
IC545	8-759-995-64	IC MB86023
IC546	8-759-995-64	IC MB86023
IC547	8-759-100-96	IC UPC4558G2
IC548	8-759-100-96	IC UPC4558G2
IC549	8-759-114-06	IC UPC814G2-1
IC550	8-759-114-06	IC UPC814G2-1
IC551	8-759-114-06	IC UPC814G2-1
IC552	8-759-147-47	IC UPC-1093T
<COIL>		
L501	1-459-155-00	COIL (WITH CORE) 45UH

REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
	L502	1-459-155-00	COIL (WITH CORE) 45UH	
	<RESISTOR>			
	R501	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R502	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R503	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R504	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R505	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R506	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R507	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R508	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R509	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R510	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R511	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R512	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R513	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R514	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R515	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R516	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R517	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
	R518	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R519	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R520	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R521	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R522	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R523	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R524	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R525	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R526	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R527	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R528	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R529	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R530	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R531	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R532	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R533	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R534	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	R535	1-216-627-11	METAL CHIP 100 0.50%	1/10W
	R536	1-216-651-11	METAL CHIP 1K 0.50%	1/10W
	R537	1-216-653-11	METAL CHIP 1.2K 0.50%	1/10W
	R538	1-216-653-11	METAL CHIP 1.2K 0.50%	1/10W
	R539	1-216-653-11	METAL CHIP 1.2K 0.50%	1/10W
	R540	1-216-627-11	METAL CHIP 100 0.50%	1/10W
	R541	1-216-651-11	METAL CHIP 1K 0.50%	1/10W
	R542	1-216-671-11	METAL CHIP 6.8K 0.50%	1/10W
	R543	1-216-671-11	METAL CHIP 6.8K 0.50%	1/10W
	R544	1-216-671-11	METAL CHIP 6.8K 0.50%	1/10W
	R545	1-216-627-11	METAL CHIP 100 0.50%	1/10W
	R546	1-216-651-11	METAL CHIP 1K 0.50%	1/10W
	R547	1-216-663-11	METAL CHIP 3.3K 0.50%	1/10W
	R548	1-216-663-11	METAL CHIP 3.3K 0.50%	1/10W
	R549	1-216-663-11	METAL CHIP 3.3K 0.50%	1/10W
	R550	1-216-627-11	METAL CHIP 100 0.50%	1/10W
	R551	1-216-651-11	METAL CHIP 1K 0.50%	1/10W
	R552	1-216-667-11	METAL CHIP 4.7K 0.50%	1/10W
	R553	1-216-667-11	METAL CHIP 4.7K 0.50%	1/10W
	R554	1-216-667-11	METAL CHIP 4.7K 0.50%	1/10W
	R555	1-216-627-11	METAL CHIP 100 0.50%	1/10W
	R556	1-216-671-11	METAL CHIP 6.8K 0.50%	1/10W
	R557	1-216-671-11	METAL CHIP 6.8K 0.50%	1/10W
	R558	1-216-627-11	METAL CHIP 100 0.50%	1/10W
	R559	1-216-667-11	METAL CHIP 4.7K 0.50%	1/10W
	R560	1-216-663-11	METAL CHIP 3.3K 0.50%	1/10W

-291-

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C134	1-124-478-11	ELECT	100MF 20% 25V	D113	8-719-911-19	DIODE ISS119	
C135	1-124-478-11	ELECT	100MF 20% 25V	D114	8-719-110-53	DIODE RD20ES-B2	
C136	1-126-233-11	ELECT	22MF 20% 50V	D115	8-719-110-53	DIODE RD20ES-B2	
C137	1-102-973-00	CERAMIC	100PF 5% 50V	D116	8-719-920-67	DIODE ERC91-02	
C138	1-123-875-11	ELECT	10MF 20% 50V	D117	8-719-911-19	DIODE ISS119	
C139	1-124-360-00	ELECT	1000MF 20% 16V	D118	8-719-938-28	DIODE ERA22-06	
C140	1-136-169-00	FILM	0.22MF 5% 50V	D119	8-719-911-19	DIODE ISS119	
C141	1-130-471-00	MYLAR	0.001MF 5% 50V	D120	8-719-911-19	DIODE ISS119	
C142	1-125-499-11	ELECT (BLOCK)	220MF 20% 200V	D121	8-719-911-19	DIODE ISS119	
C143	1-102-824-00	CERAMIC	470PF 5% 50V	D122	8-719-911-19	DIODE ISS119	
C144	1-136-165-00	FILM	0.1MF 5% 50V	D123	8-719-911-19	DIODE ISS119	
C145	1-136-153-00	FILM	0.01MF 5% 50V	D124	8-719-938-28	DIODE ERA22-06	
C146	1-136-173-00	FILM	0.47MF 5% 50V	D126	8-719-110-88	DIODE RD39ES-B2	
C147	1-136-173-00	FILM	0.47MF 5% 50V	D127	8-719-110-41	DIODE RD15ES-B2	
C148	1-126-101-11	ELECT	100MF 20% 16V	D128	8-719-110-41	DIODE RD15ES-B2	
C149	1-123-875-11	ELECT	10MF 20% 50V	D129	8-719-110-41	DIODE RD15ES-B2	
C150	1-130-471-00	MYLAR	0.001MF 5% 50V	D130	8-719-110-41	DIODE RD15ES-B2	
C151	1-124-499-11	ELECT	1MF 20% 50V	D131	8-719-911-19	DIODE ISS119	
C152	1-136-165-00	FILM	0.1MF 5% 50V	D132	8-719-911-19	DIODE ISS119	
C153	1-124-963-11	ELECT	33MF 20% 16V	D133	8-719-911-19	DIODE ISS119	
C154	1-136-165-00	FILM	0.1MF 5% 50V	D134	8-719-300-80	DIODE RU-1C	
C155	1-136-153-00	FILM	0.01MF 5% 50V	D135	8-719-300-80	DIODE RU-1C	
C156	1-136-165-00	FILM	0.1MF 5% 50V	D136	8-719-300-80	DIODE RU-1C	
C157	1-136-157-00	FILM	0.022MF 5% 50V	D137	8-719-300-80	DIODE RU-1C	
C158	1-124-046-00	ELECT	10MF 160V	D138	8-719-911-19	DIODE ISS119	
C159	1-136-111-00	FILM	1MF 5% 200V	D139	8-719-911-19	DIODE ISS119	
C160	1-136-111-00	FILM	1MF 5% 200V	D140	8-719-911-19	DIODE ISS119	
C161	1-124-499-11	ELECT	1MF 20% 50V	D141	8-719-911-19	DIODE ISS119	
C162	1-136-111-00	FILM	1MF 5% 200V	D142	8-719-911-19	DIODE ISS119	
C163	1-123-875-11	ELECT	10MF 20% 50V	D143	8-719-911-19	DIODE ISS119	
C164	1-123-875-11	ELECT	10MF 20% 50V	D144	8-719-901-19	DIODE V11N	
C165	1-123-875-11	ELECT	10MF 20% 50V	D145	8-719-911-19	DIODE ISS119	
C166	1-123-875-11	ELECT	10MF 20% 50V	D146	8-719-938-28	DIODE ERA22-06	
C167	1-102-824-00	CERAMIC	470PF 5% 50V	D147	8-719-110-08	DIODE RD8.2ES-B2	
C168	1-136-153-00	FILM	0.01MF 5% 50V	D148	8-719-110-41	DIODE RD15ES-B2	
C169	1-124-768-11	ELECT	4.7MF 20% 50V				
C170	1-124-963-11	ELECT	33MF 20% 16V				
C171	1-136-165-00	FILM	0.1MF 5% 50V				
C172	1-123-875-11	ELECT	10MF 20% 50V				
C173	1-124-963-11	ELECT	33MF 20% 16V				
C174	1-124-963-11	ELECT	33MF 20% 16V				
C175	1-130-706-00	FILM	0.008MF 3% 1.6KV				
C176	1-106-391-12	MYLAR	0.1MF 10% 200V				
<DIODE>							
D1	8-719-970-89	DIODE DD50R					
D7	8-719-908-20	DIODE ERC88-009					
D8	8-719-908-20	DIODE ERC88-009					
D9	8-719-971-20	DIODE ERC38-06					
D10	8-719-971-20	DIODE ERC38-06					
D12	8-719-971-20	DIODE ERC38-06					
D13	8-719-305-15	DIODE GH-3F					
D14	8-719-900-95	DIODE V09G					
D15	8-719-933-02	DIODE ERD33-02					
D103	8-719-911-19	DIODE ISS119					
D104	8-719-911-19	DIODE ISS119					
D105	8-719-938-28	DIODE ERA22-06					
D106	8-719-938-28	DIODE ERA22-06					
D107	8-719-911-19	DIODE ISS119					
D109	8-719-938-28	DIODE ERA22-06					
D110	8-719-911-19	DIODE ISS119					
D111	8-719-911-19	DIODE ISS119					
D112	8-719-900-26	DIODE ERD29-08J					
<COIL>							
FB1	1-410-396-41	FERRITE BEAD INDUCTOR					
FB2	1-410-396-41	FERRITE BEAD INDUCTOR					
FB3	1-410-396-41	FERRITE BEAD INDUCTOR					
FB4	1-410-396-41	FERRITE BEAD INDUCTOR					
FB5	1-410-396-41	FERRITE BEAD INDUCTOR					
L100	1-459-155-00	COIL (WITH CORE) 45UH					
L102	1-459-155-00	COIL (WITH CORE) 45UH					
L103	1-459-155-00	COIL (WITH CORE) 45UH					
L104	1-459-155-00	COIL (WITH CORE) 45UH					
L106	1-459-483-00	COIL (WITH CORE)					
L107	1-410-093-11	INDUCTOR 33MMH					
L108	1-410-093-11	INDUCTOR 33MMH					
L109	1-459-104-00	COIL, DUST CORE					
L110	1-459-104-00	COIL, DUST CORE					
L111	1-410-093-11	INDUCTOR 33MMH					
L112	1-460-022-11	COIL, CHOKE 1.3MMH					
L113	1-410-680-31	INDUCTOR 330UH					
L114	1-410-686-11	INDUCTOR 1MMH					
L115	1-407-500-00	INDUCTOR 4.7MMH					
LV1	1-460-019-11	COIL, HORIZONTAL ADJUSTMENT					
LV2	1-460-019-11	COIL, HORIZONTAL ADJUSTMENT					
LV3	1-460-019-11	COIL, HORIZONTAL ADJUSTMENT					

E

REF. NO.	PART NO.	DESCRIPTION
<IC>		
IC1	8-759-945-58	IC RC4558P
IC2	8-759-945-58	IC RC4558P
IC3	8-759-945-58	IC RC4558P
IC101	8-759-345-38	IC HD14538BP
IC102	8-759-109-82	IC UPC814C
IC103	8-759-109-82	IC UPC814C
IC104	8-759-945-58	IC RC4558P
IC105	8-759-945-58	IC RC4558P
IC106	8-759-945-58	IC RC4558P
IC107	8-759-014-95	IC MC1495L
IC108	8-759-945-58	IC RC4558P
IC109	8-759-982-13	IC RC7812FA
IC110	8-759-179-12	IC UPC7912H
IC111	8-759-100-75	IC UPC1394C
IC112	8-759-945-58	IC RC4558P
IC113	8-759-103-93	IC UPC393C
IC114	8-759-103-93	IC UPC393C
<TRANSISTOR>		
Q1	8-729-142-69	TRANSISTOR 2SK817
Q2	8-729-142-68	TRANSISTOR 2SJ143
Q3	8-729-142-69	TRANSISTOR 2SK817
Q4	8-729-142-68	TRANSISTOR 2SJ143
Q5	8-729-142-69	TRANSISTOR 2SK817
Q6	8-729-142-68	TRANSISTOR 2SJ143
Q7	8-729-820-71	TRANSISTOR 2SC3998
Q21	8-729-801-75	TRANSISTOR 2SD1403
Q22	8-729-119-80	TRANSISTOR 2SC2688-LK
Q101	8-729-105-74	TRANSISTOR 2SK523-M1
Q102	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q103	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q104	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q106	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q107	8-729-140-96	TRANSISTOR 2SD774-34
Q108	8-729-140-97	TRANSISTOR 2SB734-34
Q109	8-729-105-74	TRANSISTOR 2SK523-M1
Q110	8-729-143-42	TRANSISTOR 2SK929
Q111	8-729-143-42	TRANSISTOR 2SK929
Q112	8-729-142-68	TRANSISTOR 2SJ143
Q113	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q115	8-729-900-80	TRANSISTOR DTC114ES
Q116	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q117	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q118	8-729-105-74	TRANSISTOR 2SK523-M1
Q120	8-729-802-71	TRANSISTOR 2SA1407
Q121	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q127	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q128	8-729-900-80	TRANSISTOR DTC114ES
Q129	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q130	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q131	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q132	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q133	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q134	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q135	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q136	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q137	8-729-119-80	TRANSISTOR 2SC2688-LK
Q138	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q139	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q140	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q141	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q142	8-729-143-42	TRANSISTOR 2SK929
Q143	8-729-119-80	TRANSISTOR 2SC2688-LK

REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
	Q144	8-729-905-86	TRANSISTOR 2SC4054N	
	Q145	8-729-402-03	TRANSISTOR 2SK755	
	Q146	8-729-119-80	TRANSISTOR 2SC2688-LK	
	Q147	8-729-905-86	TRANSISTOR 2SC4054N	
	Q148	8-729-802-71	TRANSISTOR 2SA1407	
	Q149	8-729-119-78	TRANSISTOR 2SC2785-HFE	
	Q150	8-729-402-03	TRANSISTOR 2SK755	
<RESISTOR>				
	R1	1-216-393-00	METAL OXIDE 2.2 5% 3W F	
	R2	1-216-393-00	METAL OXIDE 2.2 5% 3W F	
	R3	1-216-393-00	METAL OXIDE 2.2 5% 3W F	
	R4	1-249-417-11	CARBON 1K 5% 1/4W	
	R5	1-215-445-00	METAL 10K 1% 1/6W	
	R7	1-215-445-00	METAL 10K 1% 1/6W	
	R8	1-215-445-00	METAL 10K 1% 1/6W	
	R9	1-215-445-00	METAL 10K 1% 1/6W	
	R10	1-249-417-11	CARBON 1K 5% 1/4W	
	R11	1-214-824-11	METAL 22 1% 1/2W	
	R12	1-214-824-11	METAL 22 1% 1/2W	
	R13	1-214-824-11	METAL 22 1% 1/2W	
	R14	1-249-417-11	CARBON 1K 5% 1/4W	
	R15	1-215-445-00	METAL 10K 1% 1/6W	
	R17	1-215-445-00	METAL 10K 1% 1/6W	
	R18	1-215-445-00	METAL 10K 1% 1/6W	
	R19	1-215-445-00	METAL 10K 1% 1/6W	
	R20	1-249-417-11	CARBON 1K 5% 1/4W	
	R21	1-214-832-00	METAL 47 1% 1/2W	
	R22	1-214-832-00	METAL 47 1% 1/2W	
	R23	1-214-832-00	METAL 47 1% 1/2W	
	R24	1-249-417-11	CARBON 1K 5% 1/4W	
	R25	1-215-445-00	METAL 10K 1% 1/6W	
	R27	1-215-445-00	METAL 10K 1% 1/6W	
	R28	1-215-445-00	METAL 10K 1% 1/6W	
	R29	1-215-445-00	METAL 10K 1% 1/6W	
	R30	1-249-417-11	CARBON 1K 5% 1/4W	
	R31	1-214-824-11	METAL 22 1% 1/2W	
	R32	1-214-824-11	METAL 22 1% 1/2W	
	R33	1-214-824-11	METAL 22 1% 1/2W	
	R34	1-214-824-11	METAL 22 1% 1/2W	
	R35	1-214-824-11	METAL 22 1% 1/2W	
	R36	1-214-824-11	METAL 22 1% 1/2W	
	R37	1-214-832-00	METAL 47 1% 1/2W	
	R38	1-214-832-00	METAL 47 1% 1/2W	
	R39	1-214-832-00	METAL 47 1% 1/2W	
	R40	1-214-824-11	METAL 22 1% 1/2W	
	R41	1-214-824-11	METAL 22 1% 1/2W	
	R42	1-214-824-11	METAL 22 1% 1/2W	
	R51	1-249-474-11	CARBON 1 5% 1/2W F	
	R52	1-249-474-11	CARBON 1 5% 1/2W F	
	R53	1-249-474-11	CARBON 1 5% 1/2W F	
	R54	1-215-857-11	METAL OXIDE 10 5% 1W F	
	R55	1-215-924-00	METAL OXIDE 15K 5% 3W F	
	R56	1-247-716-11	CARBON 1.8K 5% 1/4W F	
	R57	1-249-405-11	CARBON 100 5% 1/4W	
	R58	1-249-405-11	CARBON 100 5% 1/4W	
	R59	1-249-405-11	CARBON 100 5% 1/4W	
	R60	1-249-405-11	CARBON 100 5% 1/4W	
	R61	1-249-405-11	CARBON 100 5% 1/4W	
	R62	1-249-405-11	CARBON 100 5% 1/4W F	
	R63	1-247-700-11	CARBON 100 5% 1/4W F	
	R64	1-247-700-11	CARBON 100 5% 1/4W F	

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R65	1-247-700-11	CARBON	100 5% 1/4W F	R162	1-215-866-11	METAL OXIDE	330 5% 1W F
R66	1-215-905-11	METAL OXIDE	10 5% 3W F	R163	1-215-461-00	METAL	47K 1% 1/6W
R67	1-216-397-11	METAL OXIDE	4.7 5% 3W F	R164	1-249-421-11	CARBON	2.2K 5% 1/4W
R68	1-216-397-11	METAL OXIDE	4.7 5% 3W F	R165	1-215-445-00	METAL	10K 1% 1/6W
R69	1-216-397-11	METAL OXIDE	4.7 5% 3W F	R166	1-249-429-11	CARBON	10K 5% 1/4W
R101	1-215-457-00	METAL	33K 1% 1/6W	R167	1-249-437-11	CARBON	47K 5% 1/4W
R102	1-249-429-11	CARBON	10K 5% 1/4W	R168	1-249-429-11	CARBON	10K 5% 1/4W
R103	1-249-429-11	CARBON	10K 5% 1/4W	R169	1-247-725-11	CARBON	10K 5% 1/4W F
R105	1-249-425-11	CARBON	4.7K 5% 1/4W	R170	1-249-425-11	CARBON	4.7K 5% 1/4W
R106	1-215-445-00	METAL	10K 1% 1/6W	R171	1-249-417-11	CARBON	1K 5% 1/4W
R107	1-249-429-11	CARBON	10K 5% 1/4W	R172	1-249-417-11	CARBON	1K 5% 1/4W
R109	1-249-429-11	CARBON	10K 5% 1/4W	R173	1-216-389-11	METAL OXIDE	1 5% 3W F
R110	1-249-417-11	CARBON	1K 5% 1/4W	R174	1-216-388-11	METAL OXIDE	0.82 5% 3W F
R111	1-249-429-11	CARBON	10K 5% 1/4W	R176	1-247-713-11	CARBON	1K 5% 1/4W F
R112	1-249-425-11	CARBON	4.7K 5% 1/4W	R177	1-215-445-00	METAL	10K 1% 1/6W
R113	1-249-405-11	CARBON	100 5% 1/4W	R178	1-249-417-11	CARBON	1K 5% 1/4W
R114	1-249-417-11	CARBON	1K 5% 1/4W	R179	1-249-429-11	CARBON	10K 5% 1/4W
R115	1-215-445-00	METAL	10K 1% 1/6W	R180	1-215-433-00	METAL	3.3K 1% 1/6W
R116	1-215-445-00	METAL	10K 1% 1/6W	R181	1-249-441-11	CARBON	100K 5% 1/4W
R117	1-215-433-00	METAL	3.3K 1% 1/6W	R182	1-249-421-11	CARBON	2.2K 5% 1/4W
R118	1-249-423-11	CARBON	3.3K 5% 1/4W	R183	1-249-405-11	CARBON	100 5% 1/4W
R119	1-215-457-00	METAL	33K 1% 1/6W	R184	1-249-425-11	CARBON	4.7K 5% 1/4W
R120	1-215-457-00	METAL	33K 1% 1/6W	R186	1-249-437-11	CARBON	47K 5% 1/4W
R121	1-215-445-00	METAL	10K 1% 1/6W	R187	1-215-461-00	METAL	47K 1% 1/6W
R122	1-249-425-11	CARBON	4.7K 5% 1/4W	R191	1-249-423-11	CARBON	3.3K 5% 1/4W
R123	1-215-445-00	METAL	10K 1% 1/6W	R192	1-249-433-11	CARBON	22K 5% 1/4W
R124	1-215-445-00	METAL	10K 1% 1/6W	R193	1-247-903-00	CARBON	1M 5% 1/4W
R125	1-215-457-00	METAL	33K 1% 1/6W	R194	1-249-423-11	CARBON	3.3K 5% 1/4W
R126	1-215-457-00	METAL	33K 1% 1/6W	R195	1-249-423-11	CARBON	3.3K 5% 1/4W
R127	1-215-447-00	METAL	12K 1% 1/6W	R196	1-247-883-00	CARBON	150K 5% 1/4W
R128	1-215-445-00	METAL	10K 1% 1/6W	R197	1-249-405-11	CARBON	100 5% 1/4W
R129	1-215-447-00	METAL	12K 1% 1/6W	R198	1-215-447-00	METAL	12K 1% 1/6W
R130	1-249-425-11	CARBON	4.7K 5% 1/4W	R199	1-249-423-11	CARBON	3.3K 5% 1/4W
R131	1-215-445-00	METAL	10K 1% 1/6W	R201	1-249-417-11	CARBON	1K 5% 1/4W
R132	1-215-449-00	METAL	15K 1% 1/6W	R202	1-249-417-11	CARBON	1K 5% 1/4W
R133	1-249-425-11	CARBON	4.7K 5% 1/4W	R203	1-249-453-11	CARBON	3.3 5% 1/4W F
R134	1-215-453-00	METAL	22K 1% 1/6W	R204	1-249-429-11	CARBON	10K 5% 1/4W
R135	1-249-429-11	CARBON	10K 5% 1/4W	R205	1-249-427-11	CARBON	6.8K 5% 1/4W
R136	1-249-423-11	CARBON	3.3K 5% 1/4W	R206	1-249-429-11	CARBON	10K 5% 1/4W
R137	1-249-423-11	CARBON	3.3K 5% 1/4W	R207	1-249-441-11	CARBON	100K 5% 1/4W
R138	1-249-423-11	CARBON	3.3K 5% 1/4W	R208	1-216-341-11	METAL OXIDE	0.22 5% 1W F
R139	1-249-425-11	CARBON	4.7K 5% 1/4W	R209	1-249-417-11	CARBON	1K 5% 1/4W
R140	1-249-417-11	CARBON	1K 5% 1/4W	R210	1-215-451-00	METAL	18K 1% 1/6W
R141	1-249-421-11	CARBON	2.2K 5% 1/4W	R212	1-249-431-11	CARBON	15K 5% 1/4W
R142	1-249-421-11	CARBON	2.2K 5% 1/4W	R213	1-249-429-11	CARBON	10K 5% 1/4W
R143	1-249-417-11	CARBON	1K 5% 1/4W	R214	1-215-883-11	METAL OXIDE	33 5% 2W F
R144	1-249-421-11	CARBON	2.2K 5% 1/4W	R215	1-249-417-11	CARBON	1K 5% 1/4W
R145	1-249-423-11	CARBON	3.3K 5% 1/4W	R216	1-249-423-11	CARBON	3.3K 5% 1/4W
R146	1-249-437-11	CARBON	47K 5% 1/4W	R217	1-249-399-11	CARBON	33 5% 1/4W
R147	1-249-421-11	CARBON	2.2K 5% 1/4W	R218	1-249-417-11	CARBON	1K 5% 1/4W F
R148	1-249-437-11	CARBON	47K 5% 1/4W	R219	1-215-445-00	METAL	10K 1% 1/6W
R149	1-249-417-11	CARBON	1K 5% 1/4W	R220	1-215-445-00	METAL	10K 1% 1/6W
R150	1-215-461-00	METAL	47K 1% 1/6W	R221	1-249-476-11	CARBON	1.5 5% 1/2W F
R151	1-249-425-11	CARBON	4.7K 5% 1/4W	R222	1-249-441-11	CARBON	100K 5% 1/4W
R152	1-215-445-00	METAL	10K 1% 1/6W	R223	1-249-429-11	CARBON	10K 5% 1/4W
R153	1-215-445-00	METAL	10K 1% 1/6W	R224	1-249-429-11	CARBON	10K 5% 1/4W
R154	1-247-895-00	CARBON	470K 5% 1/4W	R225	1-249-421-11	CARBON	2.2K 5% 1/4W
R155	1-249-420-11	CARBON	1.8K 5% 1/4W	R226	1-215-445-00	METAL	10K 1% 1/6W
R156	1-249-437-11	CARBON	47K 5% 1/4W	R227	1-249-429-11	CARBON	10K 5% 1/4W
R157	1-249-413-11	CARBON	470 5% 1/4W	R228	1-249-429-11	CARBON	10K 5% 1/4W
R158	1-249-405-11	CARBON	100 5% 1/4W	R229	1-249-429-11	CARBON	10K 5% 1/4W
R159	1-249-405-11	CARBON	100 5% 1/4W	R230	1-249-443-11	CARBON	0.47 5% 1/4W F
R160	1-249-417-11	CARBON	1K 5% 1/4W	R231	1-249-443-11	CARBON	0.47 5% 1/4W F
R161	1-215-467-00	METAL	82K 1% 1/6W				

REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
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—296—

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C106	1-124-499-11	ELECT	1MF	20%	50V	C325	1-101-004-00 CERAMIC 0.01MF 50V
C107	1-101-004-00	CERAMIC	0.01MF		50V	C326	1-124-477-11 ELECT 47MF 20% 16V
C108	1-124-122-11	ELECT	100MF	20%	50V	C327	1-101-004-00 CERAMIC 0.01MF 50V
C109	1-124-637-11	ELECT	1000MF	20%	50V	C328	1-123-875-11 ELECT 10MF 20% 50V
C202	1-102-973-00	CERAMIC	100PF	5%	50V	C329	1-101-004-00 CERAMIC 0.01MF 50V
C203	1-102-973-00	CERAMIC	100PF	5%	50V	C330	1-123-875-11 ELECT 10MF 20% 50V
C204	1-136-153-00	FILM	0.01MF	5%	50V	C331	1-101-004-00 CERAMIC 0.01MF 50V
C205	1-124-477-11	ELECT	47MF	20%	16V	C332	1-123-875-11 ELECT 10MF 20% 50V
C206	1-124-122-11	ELECT	100MF	20%	50V	C333	1-101-004-00 CERAMIC 0.01MF 50V
C207	1-101-004-00	CERAMIC	0.01MF		50V	C334	1-123-875-11 ELECT 10MF 20% 50V
C208	1-124-122-11	ELECT	100MF	20%	50V	C335	1-101-004-00 CERAMIC 0.01MF 50V
C209	1-101-004-00	CERAMIC	0.01MF		50V	C336	1-123-875-11 ELECT 10MF 20% 50V
C211	1-102-973-00	CERAMIC	100PF	5%	50V	C337	1-101-004-00 CERAMIC 0.01MF 50V
C212	1-102-973-00	CERAMIC	100PF	5%	50V	C338	1-123-875-11 ELECT 10MF 20% 50V
C213	1-136-153-00	FILM	0.01MF	5%	50V	C339	1-101-004-00 CERAMIC 0.01MF 50V
C214	1-124-477-11	ELECT	47MF	20%	16V	C340	1-101-880-00 CERAMIC 47PF 5% 50V
C215	1-124-122-11	ELECT	100MF	20%	50V	C341	1-101-880-00 CERAMIC 47PF 5% 50V
C216	1-101-004-00	CERAMIC	0.01MF		50V		
C217	1-124-122-11	ELECT	100MF	20%	50V		
C218	1-101-004-00	CERAMIC	0.01MF		50V		
C220	1-102-973-00	CERAMIC	100PF	5%	50V		
C221	1-102-973-00	CERAMIC	100PF	5%	50V		
C222	1-136-153-00	FILM	0.01MF	5%	50V		
C223	1-124-477-11	ELECT	47MF	20%	16V		
C224	1-124-122-11	ELECT	100MF	20%	50V		
C225	1-101-004-00	CERAMIC	0.01MF		50V		
C226	1-124-122-11	ELECT	100MF	20%	50V		
C227	1-101-004-00	CERAMIC	0.01MF		50V		
C228	1-123-875-11	ELECT	10MF	20%	50V		
C229	1-101-004-00	CERAMIC	0.01MF		50V		
C230	1-123-875-11	ELECT	10MF	20%	50V		
C231	1-101-004-00	CERAMIC	0.01MF		50V		
C232	1-123-875-11	ELECT	10MF	20%	50V		
C233	1-101-004-00	CERAMIC	0.01MF		50V		
C234	1-123-875-11	ELECT	10MF	20%	50V		
C235	1-101-004-00	CERAMIC	0.01MF		50V		
C236	1-123-875-11	ELECT	10MF	20%	50V		
C237	1-101-004-00	CERAMIC	0.01MF		50V		
C238	1-123-875-11	ELECT	10MF	20%	50V		
C239	1-101-004-00	CERAMIC	0.01MF		50V		
C240	1-101-880-00	CERAMIC	47PF	5%	50V		
C241	1-101-880-00	CERAMIC	47PF	5%	50V		
C242	1-101-880-00	CERAMIC	47PF	5%	50V		
C302	1-102-973-00	CERAMIC	100PF	5%	50V		
C303	1-102-973-00	CERAMIC	100PF	5%	50V		
C304	1-136-153-00	FILM	0.01MF	5%	50V		
C305	1-124-477-11	ELECT	47MF	20%	16V		
C306	1-124-122-11	ELECT	100MF	20%	50V		
C307	1-101-004-00	CERAMIC	0.01MF		50V		
C308	1-124-122-11	ELECT	100MF	20%	50V		
C309	1-101-004-00	CERAMIC	0.01MF		50V		
C311	1-102-973-00	CERAMIC	100PF	5%	50V		
C312	1-102-973-00	CERAMIC	100PF	5%	50V		
C313	1-136-153-00	FILM	0.01MF	5%	50V		
C314	1-124-477-11	ELECT	47MF	20%	16V		
C315	1-124-122-11	ELECT	100MF	20%	50V		
C316	1-101-004-00	CERAMIC	0.01MF		50V		
C317	1-124-122-11	ELECT	100MF	20%	50V		
C318	1-101-004-00	CERAMIC	0.01MF		50V		
C320	1-102-973-00	CERAMIC	100PF	5%	50V		
C321	1-102-973-00	CERAMIC	100PF	5%	50V		
C322	1-136-153-00	FILM	0.01MF	5%	50V		
C323	1-124-477-11	ELECT	47MF	20%	16V		
C324	1-124-477-11	ELECT	47MF	20%	16V		
<DIODE>							
D1	8-719-900-95	DIODE V09G					
D2	8-719-900-95	DIODE V09G					
D3	8-719-900-95	DIODE V09G					
D4	8-719-911-19	DIODE ISS119					
D5	8-719-900-95	DIODE V09G					
D6	8-719-911-19	DIODE ISS119					
D7	8-719-900-95	DIODE V09G					
D8	8-719-911-19	DIODE ISS119					
D9	8-719-911-19	DIODE ISS119					
D10	8-719-911-19	DIODE ISS119					
D11	8-719-911-19	DIODE ISS119					
D12	8-719-911-19	DIODE ISS119					
D13	8-719-911-19	DIODE ISS119					
D15	8-719-911-19	DIODE ISS119					
D101	8-719-911-19	DIODE ISS119					
D102	8-719-908-20	DIODE ERC88-009					
D103	8-719-908-20	DIODE ERC88-009					
D104	8-719-911-19	DIODE ISS119					
D105	8-719-908-20	DIODE ERC88-009					
D106	8-719-908-20	DIODE ERC88-009					
D201	8-719-110-41	DIODE RD15ES-B2					
D202	8-719-109-66	DIODE RD3.3ES-B2					
D203	8-719-911-19	DIODE ISS119					
D204	8-719-911-19	DIODE ISS119					
D205	8-719-110-41	DIODE RD15ES-B2					
D206	8-719-109-66	DIODE RD3.3ES-B2					
D207	8-719-911-19	DIODE ISS119					
D208	8-719-911-19	DIODE ISS119					
D209	8-719-110-41	DIODE RD15ES-B2					
D210	8-719-109-66	DIODE RD3.3ES-B2					
D211	8-719-911-19	DIODE ISS119					
D212	8-719-911-19	DIODE ISS119					
D301	8-719-110-41	DIODE RD15ES-B2					
D302	8-719-109-66	DIODE RD3.3ES-B2					
D303	8-719-911-19	DIODE ISS119					
D304	8-719-911-19	DIODE ISS119					
D305	8-719-110-41	DIODE RD15ES-B2					
D306	8-719-109-66	DIODE RD3.3ES-B2					
D307	8-719-911-19	DIODE ISS119					
D308	8-719-911-19	DIODE ISS119					
D309	8-719-110-41	DIODE RD15ES-B2					
D310	8-719-109-66	DIODE RD3.3ES-B2					

Dc

REF. NO. PART NO. DESCRIPTION

D311 8-719-911-19 DIODE 1SS119
D312 8-719-911-19 DIODE 1SS119

<COIL>

FB1 1-410-396-41 FERRITE BEAD INDUCTOR
FB2 1-410-396-41 FERRITE BEAD INDUCTOR
FB3 1-410-396-41 FERRITE BEAD INDUCTOR
FB4 1-410-396-41 FERRITE BEAD INDUCTOR
L101 1-459-155-00 COIL (WITH CORE) 45UH

L102 1-459-155-00 COIL (WITH CORE) 45UH
L103 1-459-155-00 COIL (WITH CORE) 45UH
L104 1-459-155-00 COIL (WITH CORE) 45UH

<IC>

IC1 8-759-982-13 IC RC7812FA
IC2 8-759-179-12 IC UPC7912H
IC3 8-759-945-58 IC RC4558P
IC4 8-759-113-13 IC UPC1498H
IC5 8-759-945-58 IC RC4558P

IC6 8-759-113-13 IC UPC1498H
IC7 8-759-945-58 IC RC4558P
IC8 8-759-113-13 IC UPC1498H
IC9 8-759-945-58 IC RC4558P
IC101 8-759-109-82 IC UPC814C

IC102 8-759-109-82 IC UPC814C
IC103 8-759-109-82 IC UPC814C
IC201 8-759-973-02 IC LM6364N
IC202 8-759-973-02 IC LM6364N
IC203 8-759-973-02 IC LM6364N

IC301 8-759-973-02 IC LM6364N
IC302 8-759-973-02 IC LM6364N
IC303 8-759-973-02 IC LM6364N

<TRANSISTOR>

Q1 8-729-119-78 TRANSISTOR 2SC2785-HFE
Q2 8-729-119-78 TRANSISTOR 2SC2785-HFE
Q3 8-729-119-78 TRANSISTOR 2SC2785-HFE
Q4 8-729-900-89 TRANSISTOR DTC144ES
Q5 8-729-900-89 TRANSISTOR DTC144ES

Q6 8-729-119-78 TRANSISTOR 2SC2785-HFE
Q7 8-729-900-89 TRANSISTOR DTC144ES
Q8 8-729-900-89 TRANSISTOR DTC144ES
Q9 8-729-207-89 TRANSISTOR 2SA1358-Y
Q10 8-729-207-82 TRANSISTOR 2SC3421-Y

Q11 8-729-900-89 TRANSISTOR DTC144ES
Q13 8-729-900-89 TRANSISTOR DTC144ES
Q101 8-729-119-78 TRANSISTOR 2SC2785-HFE
Q102 8-729-105-72 TRANSISTOR 2SK523-L1
Q103 8-729-119-78 TRANSISTOR 2SC2785-HFE

Q104 8-729-119-76 TRANSISTOR 2SA1175-HFE
Q105 8-729-142-68 TRANSISTOR 2SJ143
Q106 8-729-119-78 TRANSISTOR 2SC2785-HFE
Q107 8-729-119-76 TRANSISTOR 2SA1175-HFE
Q108 8-729-142-69 TRANSISTOR 2SK817

Q201 8-729-207-89 TRANSISTOR 2SA1358-Y
Q202 8-729-207-82 TRANSISTOR 2SC3421-Y
Q203 8-729-142-74 TRANSISTOR 2SD1977
Q204 8-729-142-70 TRANSISTOR 2SB1315
Q205 8-729-207-89 TRANSISTOR 2SA1358-Y

Q206 8-729-207-82 TRANSISTOR 2SC3421-Y
Q207 8-729-142-74 TRANSISTOR 2SD1977

REMARK

REF. NO. PART NO.

DESCRIPTION

REMARK

Q208 8-729-142-70 TRANSISTOR 2SB1315
Q209 8-729-207-89 TRANSISTOR 2SA1358-Y
Q210 8-729-207-82 TRANSISTOR 2SC3421-Y

Q211 8-729-142-74 TRANSISTOR 2SD1977
Q212 8-729-142-70 TRANSISTOR 2SB1315
Q301 8-729-207-89 TRANSISTOR 2SA1358-Y
Q302 8-729-207-82 TRANSISTOR 2SC3421-Y
Q303 8-729-142-74 TRANSISTOR 2SD1977

Q304 8-729-142-70 TRANSISTOR 2SB1315
Q305 8-729-207-89 TRANSISTOR 2SA1358-Y
Q306 8-729-207-82 TRANSISTOR 2SC3421-Y
Q307 8-729-142-74 TRANSISTOR 2SD1977
Q308 8-729-142-70 TRANSISTOR 2SB1315

Q309 8-729-207-89 TRANSISTOR 2SA1358-Y
Q310 8-729-207-82 TRANSISTOR 2SC3421-Y
Q311 8-729-142-74 TRANSISTOR 2SD1977
Q312 8-729-142-70 TRANSISTOR 2SB1315

<RESISTOR>

REF. NO.	PART NO.	DESCRIPTION	VALUE	TOL.	TEMP.	REMARK
R1	1-215-463-00	METAL	56K	1%	1/6W	
R2	1-215-445-00	METAL	10K	1%	1/6W	
R3	1-215-445-00	METAL	10K	1%	1/6W	
R4	1-214-800-11	METAL	2.2	1%	1/2W	
R5	1-214-800-11	METAL	2.2	1%	1/2W	
R6	1-215-429-00	METAL	2.2K	1%	1/6W	
R7	1-215-421-00	METAL	1K	1%	1/6W	
R8	1-215-898-11	METAL OXIDE	10K	5%	2W	F
R9	1-249-433-11	CARBON	22K	5%	1/4W	
R10	1-249-417-11	CARBON	1K	5%	1/4W	
R11	1-249-441-11	CARBON	100K	5%	1/4W	
R12	1-249-429-11	CARBON	10K	5%	1/4W	
R13	1-249-429-11	CARBON	10K	5%	1/4W	
R14	1-249-429-11	CARBON	10K	5%	1/4W	
R15	1-215-463-00	METAL	56K	1%	1/6W	
R16	1-215-445-00	METAL	10K	1%	1/6W	
R17	1-215-445-00	METAL	10K	1%	1/6W	
R18	1-214-800-11	METAL	2.2	1%	1/2W	
R19	1-214-800-11	METAL	2.2	1%	1/2W	
R20	1-215-429-00	METAL	2.2K	1%	1/6W	
R21	1-215-421-00	METAL	1K	1%	1/6W	
R22	1-215-898-11	METAL OXIDE	10K	5%	2W	F
R23	1-249-433-11	CARBON	22K	5%	1/4W	
R24	1-249-417-11	CARBON	1K	5%	1/4W	
R25	1-249-441-11	CARBON	100K	5%	1/4W	
R26	1-249-429-11	CARBON	10K	5%	1/4W	
R27	1-249-429-11	CARBON	10K	5%	1/4W	
R28	1-249-429-11	CARBON	10K	5%	1/4W	
R29	1-215-463-00	METAL	56K	1%	1/6W	
R30	1-215-445-00	METAL	10K	1%	1/6W	
R31	1-215-445-00	METAL	10K	1%	1/6W	
R32	1-214-800-11	METAL	2.2	1%	1/2W	
R33	1-214-800-11	METAL	2.2	1%	1/2W	
R34	1-215-429-00	METAL	2.2K	1%	1/6W	
R35	1-215-421-00	METAL	1K	1%	1/6W	
R36	1-215-898-11	METAL OXIDE	10K	5%	2W	F
R37	1-249-433-11	CARBON	22K	5%	1/4W	
R38	1-249-417-11	CARBON	1K	5%	1/4W	
R39	1-249-441-11	CARBON	100K	5%	1/4W	
R40	1-249-429-11	CARBON	10K	5%	1/4W	
R41	1-249-429-11	CARBON	10K	5%	1/4W	
R42	1-249-429-11	CARBON	10K	5%	1/4W	
R43	1-249-429-11	CARBON	10K	5%	1/4W	
R44	1-249-429-11	CARBON	10K	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R45	1-249-417-11	CARBON	1K 5% 1/4W	R222	1-216-369-00	METAL OXIDE	1 5% 2W F
R46	1-249-433-11	CARBON	22K 5% 1/4W	R223	1-215-888-00	METAL OXIDE	220 5% 2W F
R47	1-249-417-11	CARBON	1K 5% 1/4W	R224	1-215-421-00	METAL	1K 1% 1/6W
R48	1-249-429-11	CARBON	10K 5% 1/4W	R225	1-215-445-00	METAL	10K 1% 1/6W
R49	1-249-429-11	CARBON	10K 5% 1/4W	R226	1-215-421-00	METAL	1K 1% 1/6W
R50	1-249-437-11	CARBON	47K 5% 1/4W	R227	1-215-421-00	METAL	1K 1% 1/6W
R51	1-249-417-11	CARBON	1K 5% 1/4W	R228	1-215-435-00	METAL	3.9K 1% 1/6W
R52	1-249-417-11	CARBON	1K 5% 1/4W	R229	1-215-421-00	METAL	1K 1% 1/6W
R53	1-249-437-11	CARBON	47K 5% 1/4W	R230	1-215-421-00	METAL	1K 1% 1/6W
R54	1-249-417-11	CARBON	1K 5% 1/4W	R231	1-214-814-11	METAL	8.2 1% 1/2W
R55	1-215-883-11	METAL OXIDE	33 5% 2W F	R232	1-214-814-11	METAL	8.2 1% 1/2W
R56	1-249-433-11	CARBON	22K 5% 1/4W	R233	1-214-814-11	METAL	8.2 1% 1/2W
R57	1-249-429-11	CARBON	10K 5% 1/4W	R234	1-214-814-11	METAL	8.2 1% 1/2W
R58	1-249-417-11	CARBON	1K 5% 1/4W	R235	1-214-814-11	METAL	8.2 1% 1/2W
R59	1-215-883-11	METAL OXIDE	33 5% 2W F	R236	1-214-814-11	METAL	8.2 1% 1/2W
R61	1-215-463-00	METAL	56K 1% 1/6W	R237	1-249-435-11	CARBON	33K 5% 1/4W
R62	1-215-463-00	METAL	56K 1% 1/6W	R238	1-249-426-11	CARBON	5.6K 5% 1/4W
R63	1-215-463-00	METAL	56K 1% 1/6W	R239	1-249-415-11	CARBON	680 5% 1/4W F
R64	1-216-363-00	METAL OXIDE	0.33 5% 2W F	R240	1-249-427-11	CARBON	6.8K 5% 1/4W
R65	1-216-363-00	METAL OXIDE	0.33 5% 2W F	R241	1-249-407-11	CARBON	150 5% 1/4W
R66	1-249-425-11	CARBON	4.7K 5% 1/4W	R242	1-249-403-11	CARBON	68 5% 1/4W F
R67	1-249-429-11	CARBON	10K 5% 1/4W	R244	1-216-369-00	METAL OXIDE	1 5% 2W F
R68	1-249-433-11	CARBON	22K 5% 1/4W	R245	1-216-369-00	METAL OXIDE	1 5% 2W F
R69	1-249-429-11	CARBON	10K 5% 1/4W	R246	1-215-888-00	METAL OXIDE	220 5% 2W F
R73	1-249-441-11	CARBON	100K 5% 1/4W	R247	1-215-421-00	METAL	1K 1% 1/6W
R74	1-249-425-11	CARBON	4.7K 5% 1/4W	R248	1-215-445-00	METAL	10K 1% 1/6W
R75	1-216-363-00	METAL OXIDE	0.33 5% 2W F	R249	1-215-421-00	METAL	1K 1% 1/6W
R76	1-216-363-00	METAL OXIDE	0.33 5% 2W F	R250	1-215-421-00	METAL	1K 1% 1/6W
R77	1-249-417-11	CARBON	1K 5% 1/4W	R251	1-215-435-00	METAL	3.9K 1% 1/6W
R101	1-249-417-11	CARBON	1K 5% 1/4W	R252	1-215-421-00	METAL	1K 1% 1/6W
R102	1-249-417-11	CARBON	1K 5% 1/4W	R253	1-215-421-00	METAL	1K 1% 1/6W
R103	1-249-419-11	CARBON	1.5K 5% 1/4W	R254	1-214-814-11	METAL	8.2 1% 1/2W
R104	1-249-429-11	CARBON	10K 5% 1/4W	R255	1-214-814-11	METAL	8.2 1% 1/2W
R105	1-249-425-11	CARBON	4.7K 5% 1/4W	R256	1-214-814-11	METAL	8.2 1% 1/2W
R106	1-249-417-11	CARBON	1K 5% 1/4W	R257	1-214-814-11	METAL	8.2 1% 1/2W
R107	1-249-393-11	CARBON	10 5% 1/4W F	R258	1-214-814-11	METAL	8.2 1% 1/2W
R108	1-249-393-11	CARBON	10 5% 1/4W F	R259	1-214-814-11	METAL	8.2 1% 1/2W
R109	1-249-405-11	CARBON	100 5% 1/4W	R260	1-249-435-11	CARBON	33K 5% 1/4W
R110	1-249-393-11	CARBON	10 5% 1/4W	R261	1-249-426-11	CARBON	5.6K 5% 1/4W
R111	1-249-417-11	CARBON	1K 5% 1/4W	R262	1-249-415-11	CARBON	680 5% 1/4W F
R112	1-249-393-11	CARBON	10 5% 1/4W F	R263	1-249-427-11	CARBON	6.8K 5% 1/4W
R113	1-249-393-11	CARBON	10 5% 1/4W F	R264	1-249-407-11	CARBON	150 5% 1/4W
R114	1-249-405-11	CARBON	100 5% 1/4W	R265	1-249-403-11	CARBON	68 5% 1/4W F
R115	1-249-393-11	CARBON	10 5% 1/4W	R266	1-216-369-00	METAL OXIDE	1 5% 2W F
R201	1-215-421-00	METAL	1K 1% 1/6W	R267	1-216-369-00	METAL OXIDE	1 5% 2W F
R202	1-215-445-00	METAL	10K 1% 1/6W	R268	1-216-369-00	METAL OXIDE	1 5% 2W F
R203	1-215-421-00	METAL	1K 1% 1/6W	R269	1-215-888-00	METAL OXIDE	220 5% 2W
R204	1-215-421-00	METAL	1K 1% 1/6W	R270	1-249-405-11	CARBON	100 5% 1/4W
R205	1-215-435-00	METAL	3.9K 1% 1/6W	R271	1-249-405-11	CARBON	100 5% 1/4W
R206	1-215-421-00	METAL	1K 1% 1/6W	R272	1-249-405-11	CARBON	100 5% 1/4W
R207	1-215-421-00	METAL	1K 1% 1/6W	R273	1-249-405-11	CARBON	100 5% 1/4W
R208	1-214-814-11	METAL	8.2 1% 1/2W	R274	1-249-405-11	CARBON	100 5% 1/4W
R209	1-214-814-11	METAL	8.2 1% 1/2W	R275	1-249-405-11	CARBON	100 5% 1/4W
R210	1-214-814-11	METAL	8.2 1% 1/2W	R301	1-215-421-00	METAL	1K 1% 1/6W
R211	1-214-814-11	METAL	8.2 1% 1/2W	R302	1-215-445-00	METAL	10K 1% 1/6W
R212	1-214-814-11	METAL	8.2 1% 1/2W	R303	1-215-421-00	METAL	1K 1% 1/6W
R213	1-214-814-11	METAL	8.2 1% 1/2W	R304	1-215-421-00	METAL	1K 1% 1/6W
R214	1-249-435-11	CARBON	33K 5% 1/4W	R305	1-215-435-00	METAL	3.9K 1% 1/6W
R215	1-249-426-11	CARBON	5.6K 5% 1/4W	R306	1-215-421-00	METAL	1K 1% 1/6W
R216	1-249-415-11	CARBON	680 5% 1/4W F	R307	1-215-421-00	METAL	1K 1% 1/6W
R217	1-249-427-11	CARBON	6.8K 5% 1/4W	R308	1-214-814-11	METAL	8.2 1% 1/2W
R218	1-249-407-11	CARBON	150 5% 1/4W	R309	1-214-814-11	METAL	8.2 1% 1/2W
R219	1-249-403-11	CARBON	68 5% 1/4W F	R310	1-214-814-11	METAL	8.2 1% 1/2W
R221	1-216-369-00	METAL OXIDE	1 5% 2W F	R311	1-214-814-11	METAL	8.2 1% 1/2W

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R312	1-214-814-11	METAL	8.2 1% 1/2W	*1-629-809-11	L BOARD		
R313	1-214-814-11	METAL	8.2 1% 1/2W		*****		
R314	1-249-435-11	CARBON	33K 5% 1/4W	*1-564-511-11	PLUG, CONNECTOR 8P		
R315	1-249-426-11	CARBON	5.6K 5% 1/4W	*1-564-512-11	PLUG, CONNECTOR 9P		
R316	1-249-415-11	CARBON	680 5% 1/4W	*1-564-514-11	PLUG, CONNECTOR 11P		
				*1-564-517-11	PLUG, CONNECTOR 2P		
R317	1-249-427-11	CARBON	6.8K 5% 1/4W				
R318	1-249-407-11	CARBON	150 5% 1/4W				
R319	1-249-403-11	CARBON	68 5% 1/4W				
R321	1-216-369-00	METAL OXIDE	1 5% 2W				
R322	1-216-369-00	METAL OXIDE	1 5% 2W				
R323	1-215-888-00	METAL OXIDE	220 5% 2W				
R324	1-215-421-00	METAL	1K 1% 1/6W				
R325	1-215-445-00	METAL	10K 1% 1/6W				
R326	1-215-421-00	METAL	1K 1% 1/6W				
R327	1-215-421-00	METAL	1K 1% 1/6W				
R328	1-215-435-00	METAL	3.9K 1% 1/6W				
R329	1-215-421-00	METAL	1K 1% 1/6W				
R330	1-215-421-00	METAL	1K 1% 1/6W				
R331	1-214-814-11	METAL	8.2 1% 1/2W				
R332	1-214-814-11	METAL	8.2 1% 1/2W				
R333	1-214-814-11	METAL	8.2 1% 1/2W				
R334	1-214-814-11	METAL	8.2 1% 1/2W				
R335	1-214-814-11	METAL	8.2 1% 1/2W				
R336	1-214-814-11	METAL	8.2 1% 1/2W				
R337	1-249-435-11	CARBON	33K 5% 1/4W				
R338	1-249-426-11	CARBON	5.6K 5% 1/4W				
R339	1-249-415-11	CARBON	680 5% 1/4W				
R340	1-249-427-11	CARBON	6.8K 5% 1/4W				
R341	1-249-407-11	CARBON	150 5% 1/4W				
R342	1-249-403-11	CARBON	68 5% 1/4W				
R344	1-216-369-00	METAL OXIDE	1 5% 2W				
R345	1-216-369-00	METAL OXIDE	1 5% 2W				
R346	1-215-888-00	METAL OXIDE	220 5% 2W				
R347	1-215-421-00	METAL	1K 1% 1/6W				
R348	1-215-445-00	METAL	10K 1% 1/6W				
R349	1-215-421-00	METAL	1K 1% 1/6W				
R350	1-215-421-00	METAL	1K 1% 1/6W				
R351	1-215-435-00	METAL	3.9K 1% 1/6W				
R352	1-215-421-00	METAL	1K 1% 1/6W				
R353	1-215-421-00	METAL	1K 1% 1/6W				
R354	1-214-814-11	METAL	8.2 1% 1/2W				
R355	1-214-814-11	METAL	8.2 1% 1/2W				
R356	1-214-814-11	METAL	8.2 1% 1/2W				
R357	1-214-814-11	METAL	8.2 1% 1/2W				
R358	1-214-814-11	METAL	8.2 1% 1/2W				
R359	1-214-814-11	METAL	8.2 1% 1/2W				
R360	1-249-435-11	CARBON	33K 5% 1/4W				
R361	1-249-426-11	CARBON	5.6K 5% 1/4W				
R362	1-249-415-11	CARBON	680 5% 1/4W				
R363	1-249-427-11	CARBON	6.8K 5% 1/4W				
R364	1-249-407-11	CARBON	150 5% 1/4W				
R365	1-249-403-11	CARBON	68 5% 1/4W				
R367	1-216-369-00	METAL OXIDE	1 5% 2W				
R368	1-216-369-00	METAL OXIDE	1 5% 2W				
R369	1-215-888-00	METAL OXIDE	220 5% 2W				
R370	1-249-405-11	CARBON	100 5% 1/4W				
R371	1-249-405-11	CARBON	100 5% 1/4W				
R372	1-249-405-11	CARBON	100 5% 1/4W				
R373	1-249-405-11	CARBON	100 5% 1/4W				
R374	1-249-405-11	CARBON	100 5% 1/4W				
R375	1-249-405-11	CARBON	100 5% 1/4W				

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QHD

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R6	1-249-399-11	CARBON	33 5% 1/4W	C39	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R7	1-249-441-11	CARBON	100K 5% 1/4W	C40	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R8	1-249-441-11	CARBON	100K 5% 1/4W	C41	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R9	1-249-441-11	CARBON	100K 5% 1/4W	C42	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R10	1-249-405-11	CARBON	100 5% 1/4W	C43	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R11	1-249-405-11	CARBON	100 5% 1/4W	C44	1-124-963-11	ELECT 33MF	20% 16V
R12	1-249-399-11	CARBON	33 5% 1/4W	C45	1-124-963-11	ELECT 33MF	20% 16V
R13	1-249-441-11	CARBON	100K 5% 1/4W	C101	1-124-282-00	ELECT 22MF	20% 16V
R14	1-249-441-11	CARBON	100K 5% 1/4W	C102	1-124-282-00	ELECT 22MF	20% 16V
R15	1-249-441-11	CARBON	100K 5% 1/4W	C103	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R16	1-249-405-11	CARBON	100 5% 1/4W	C105	1-124-282-00	ELECT 22MF	20% 16V
R17	1-249-405-11	CARBON	100 5% 1/4W	C106	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R18	1-249-399-11	CARBON	33 5% 1/4W	C107	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R19	1-249-415-11	CARBON	680 5% 1/4W	C108	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
R20	1-249-413-11	CARBON	470 5% 1/4W	C109	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
R21	1-249-441-11	CARBON	100K 5% 1/4W	C110	1-124-963-11	ELECT 33MF	20% 16V
R22	1-215-429-00	METAL	2.2K 1% 1/6W	C111	1-124-791-11	ELECT 1MF	20% 50V
R23	1-215-405-00	METAL	220 1% 1/6W	C112	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
R24	1-215-387-00	METAL	39 1% 1/6W	C114	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R25	1-215-477-00	METAL	220K 1% 1/6W	C115	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R26	1-215-477-00	METAL	220K 1% 1/6W	C116	1-124-963-11	ELECT 33MF	20% 16V
R27	1-249-441-11	CARBON	100K 5% 1/4W	C117	1-124-963-11	ELECT 33MF	20% 16V
R28	1-249-441-11	CARBON	100K 5% 1/4W	C119	1-124-963-11	ELECT 33MF	20% 16V
				C120	1-164-232-11	CERAMIC CHIP 0.01MF	50V
<CLOCK>				C121	1-164-232-11	CERAMIC CHIP 0.01MF	50V
TM1	1-548-119-21	CLOCK		C122	1-164-232-11	CERAMIC CHIP 0.01MF	50V
	1-533-190-11	CLIP, FUSE; TM1		C123	1-164-232-11	CERAMIC CHIP 0.01MF	50V
TM2	1-548-119-21	CLOCK		C124	1-164-232-11	CERAMIC CHIP 0.01MF	50V
	1-533-190-11	CLIP, FUSE; TM2		C125	1-164-232-11	CERAMIC CHIP 0.01MF	50V
TM3	1-548-119-21	CLOCK		C126	1-164-232-11	CERAMIC CHIP 0.01MF	50V
	1-533-190-11	CLIP, FUSE; TM3		C127	1-164-232-11	CERAMIC CHIP 0.01MF	50V
*****				C128	1-124-963-11	ELECT 33MF	20% 16V
A-1390-051-A	QHD BOARD, COMPLETE			C129	1-124-963-11	ELECT 33MF	20% 16V
	*****			C170	1-164-232-11	CERAMIC CHIP 0.01MF	50V
1-537-260-11	TERMINAL BOARD, INPUT OUTPUT			C173	1-124-963-11	ELECT 33MF	20% 16V
*1-568-981-11	CONNECTOR, MALE 64P			C174	1-124-963-11	ELECT 33MF	20% 16V
3-618-225-00	NUT, PLATE			C175	1-164-232-11	CERAMIC CHIP 0.01MF	50V
				C176	1-164-232-11	CERAMIC CHIP 0.01MF	50V
				C201	1-124-282-00	ELECT 22MF	20% 16V
<CAPACITOR>				C202	1-124-282-00	ELECT 22MF	20% 16V
C2	1-123-875-11	ELECT 10MF	20% 50V	C203	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C3	1-126-101-11	ELECT 100MF	20% 16V	C205	1-124-282-00	ELECT 22MF	20% 16V
C5	1-123-875-11	ELECT 10MF	20% 50V	C206	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C6	1-126-101-11	ELECT 100MF	20% 16V	C207	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C7	1-124-963-11	ELECT 33MF	20% 16V	C208	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C10	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C209	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C12	1-124-963-11	ELECT 33MF	20% 16V	C210	1-124-963-11	ELECT 33MF	20% 16V
C14	1-124-963-11	ELECT 33MF	20% 16V	C211	1-124-791-11	ELECT 1MF	20% 50V
C16	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C212	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C18	1-124-963-11	ELECT 33MF	20% 16V	C214	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C19	1-124-963-11	ELECT 33MF	20% 16V	C215	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C20	1-124-963-11	ELECT 33MF	20% 16V	C216	1-124-963-11	ELECT 33MF	20% 16V
C21	1-124-963-11	ELECT 33MF	20% 16V	C217	1-124-963-11	ELECT 33MF	20% 16V
C30	1-163-087-00	CERAMIC CHIP 4PF	0.25PF 50V	C218	1-124-963-11	ELECT 33MF	20% 16V
C32	1-124-963-11	ELECT 33MF	20% 16V	C219	1-124-963-11	ELECT 33MF	20% 16V
C33	1-124-282-00	ELECT 22MF	20% 16V	C220	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C34	1-124-282-00	ELECT 22MF	20% 16V	C221	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C35	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C222	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C36	1-124-963-11	ELECT 33MF	20% 16V	C223	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C37	1-124-963-11	ELECT 33MF	20% 16V	C224	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C38	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C225	1-164-232-11	CERAMIC CHIP 0.01MF	50V
				C226	1-164-232-11	CERAMIC CHIP 0.01MF	50V
				C227	1-164-232-11	CERAMIC CHIP 0.01MF	50V
				C228	1-124-963-11	ELECT 33MF	20% 16V

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C229	1-124-963-11	ELECT 33MF	20%	D102	8-719-800-76	DIODE 1SS226	
C270	1-124-791-11	ELECT 1MF	20%	D170	8-719-800-76	DIODE 1SS226	
C271	1-124-791-11	ELECT 1MF	20%	D201	8-719-800-76	DIODE 1SS226	
C272	1-124-791-11	ELECT 1MF	20%	D202	8-719-800-76	DIODE 1SS226	
C301	1-124-282-00	ELECT 22MF	20%	D301	8-719-800-76	DIODE 1SS226	
C302	1-124-282-00	ELECT 22MF	20%	D302	8-719-800-76	DIODE 1SS226	
C303	1-164-232-11	CERAMIC CHIP 0.01MF	20%	D401	8-719-800-76	DIODE 1SS226	
C305	1-124-282-00	ELECT 22MF	20%	D402	8-719-800-76	DIODE 1SS226	
C306	1-164-232-11	CERAMIC CHIP 0.01MF	20%	D403	8-719-800-76	DIODE 1SS226	
C307	1-164-232-11	CERAMIC CHIP 0.01MF	20%	D404	8-719-800-76	DIODE 1SS226	
C308	1-163-103-00	CERAMIC CHIP 27PF	5%	D405	8-719-800-76	DIODE 1SS226	
C309	1-163-121-00	CERAMIC CHIP 150PF	5%	D501	8-719-800-76	DIODE 1SS226	
C310	1-124-963-11	ELECT 33MF	20%	D502	8-719-800-76	DIODE 1SS226	
C311	1-124-791-11	ELECT 1MF	20%	D503	8-719-800-76	DIODE 1SS226	
C312	1-163-121-00	CERAMIC CHIP 150PF	5%	D504	8-719-800-76	DIODE 1SS226	
C314	1-164-232-11	CERAMIC CHIP 0.01MF		D505	8-719-800-76	DIODE 1SS226	
C315	1-164-232-11	CERAMIC CHIP 0.01MF		D506	8-719-105-32	DIODE RD2.7M-B2	
C316	1-124-963-11	ELECT 33MF	20%	<DELAY LINE>			
C317	1-124-963-11	ELECT 33MF	20%	DL1	1-415-466-11	DELAY LINE	
C318	1-124-963-11	ELECT 33MF	20%	DL2	1-415-466-11	DELAY LINE	
C319	1-124-963-11	ELECT 33MF	20%	DL3	1-415-464-11	DELAY LINE	
C320	1-164-232-11	CERAMIC CHIP 0.01MF		DL101	1-415-467-11	DELAY LINE	
C321	1-164-232-11	CERAMIC CHIP 0.01MF		DL201	1-415-467-11	DELAY LINE	
C322	1-164-232-11	CERAMIC CHIP 0.01MF		<IC>			
C323	1-164-232-11	CERAMIC CHIP 0.01MF		IC1	8-759-701-77	IC NJM7808FA	
C324	1-164-232-11	CERAMIC CHIP 0.01MF		IC2	8-759-701-86	IC NJM7908FA	
C325	1-164-232-11	CERAMIC CHIP 0.01MF		IC3	8-759-982-21	IC RC78L05A	
C326	1-164-232-11	CERAMIC CHIP 0.01MF		IC101	8-759-800-81	IC LA7016	
C327	1-164-232-11	CERAMIC CHIP 0.01MF		IC102	8-759-800-81	IC LA7016	
C328	1-124-963-11	ELECT 33MF	20%	IC103	8-759-800-81	IC LA7016	
C329	1-124-963-11	ELECT 33MF	20%	IC201	8-759-800-81	IC LA7016	
C401	1-124-282-00	ELECT 22MF	20%	IC202	8-759-800-81	IC LA7016	
C402	1-124-282-00	ELECT 22MF	20%	IC203	8-759-800-81	IC LA7016	
C403	1-124-963-11	ELECT 33MF	20%	IC301	8-759-800-81	IC LA7016	
C404	1-164-232-11	CERAMIC CHIP 0.01MF		IC302	8-759-800-81	IC LA7016	
C405	1-124-963-11	ELECT 33MF	20%	IC303	8-759-800-81	IC LA7016	
C406	1-124-282-00	ELECT 22MF	20%	IC401	8-759-240-53	IC TC4053BP	
C407	1-124-963-11	ELECT 33MF	20%	<COIL>			
C408	1-124-791-11	ELECT 1MF	20%	L1	1-459-155-00	COIL (WITH CORE) 45UH	
C409	1-164-232-11	CERAMIC CHIP 0.01MF		L2	1-459-155-00	COIL (WITH CORE) 45UH	
C410	1-164-232-11	CERAMIC CHIP 0.01MF		<TRANSISTOR>			
C501	1-124-282-00	ELECT 22MF	20%	Q1	8-729-103-72	TRANSISTOR 2SD1005	
C502	1-124-282-00	ELECT 22MF	20%	Q3	8-729-900-53	TRANSISTOR DTC114EK	
C503	1-124-963-11	ELECT 33MF	20%	Q4	8-729-900-53	TRANSISTOR DTC114EK	
C504	1-164-232-11	CERAMIC CHIP 0.01MF		Q5	8-729-900-53	TRANSISTOR DTC114EK	
C505	1-124-963-11	ELECT 33MF	20%	Q6	8-729-900-53	TRANSISTOR DTC114EK	
C506	1-124-282-00	ELECT 22MF	20%	Q7	8-729-271-23	TRANSISTOR 2SC2712	
C507	1-124-963-11	ELECT 33MF	20%	Q30	8-729-112-65	TRANSISTOR 2SA1462	
C508	1-124-791-11	ELECT 1MF	20%	Q31	8-729-112-65	TRANSISTOR 2SA1462	
C509	1-164-232-11	CERAMIC CHIP 0.01MF		Q32	8-729-271-23	TRANSISTOR 2SC2712	
C510	1-164-232-11	CERAMIC CHIP 0.01MF		Q33	8-729-230-46	TRANSISTOR 2SA1162-YG	
<DIODE>				Q34	8-729-230-46	TRANSISTOR 2SA1162-YG	
D1	8-719-900-95	DIODE V09G		Q35	8-729-271-23	TRANSISTOR 2SC2712	
D2	8-719-900-95	DIODE V09G		Q36	8-729-271-23	TRANSISTOR 2SC2712	
D3	8-719-900-95	DIODE V09G					
D4	8-719-105-82	DIODE RD5.1M-B2					
D6	8-719-105-82	DIODE RD5.1M-B2					
D7	8-719-105-32	DIODE RD2.7M-B2					
D30	8-719-800-76	DIODE 1SS226					
D31	8-719-105-82	DIODE RD5.1M-B2					
D32	8-719-800-76	DIODE 1SS226					
D401	8-719-800-76	DIODE 1SS226					

—303—

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R74	1-216-627-11	METAL CHIP	100 0.50% 1/10W	R152	1-216-001-00	METAL GLAZE	10 5% 1/10W
R75	1-216-627-11	METAL CHIP	100 0.50% 1/10W	R153	1-216-029-00	METAL GLAZE	150 5% 1/10W
R76	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W	R154	1-216-029-00	METAL GLAZE	150 5% 1/10W
R77	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W	R155	1-216-029-00	METAL GLAZE	150 5% 1/10W
R78	1-216-033-00	METAL GLAZE	220 5% 1/10W	R157	1-216-025-00	METAL GLAZE	100 5% 1/10W
R79	1-216-017-00	METAL GLAZE	47 5% 1/10W	R158	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R80	1-216-635-11	METAL CHIP	220 0.50% 1/10W	R159	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R81	1-216-033-00	METAL GLAZE	220 5% 1/10W	R171	1-216-653-11	METAL CHIP	1.2K 0.50% 1/10W
R82	1-216-649-11	METAL CHIP	820 0.50% 1/10W	R172	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R83	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W	R173	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W
R84	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W	R174	1-216-633-11	METAL CHIP	180 0.50% 1/10W
R85	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W	R175	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R86	1-216-025-00	METAL GLAZE	100 5% 1/10W	R176	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R87	1-216-025-00	METAL GLAZE	100 5% 1/10W	R177	1-216-025-00	METAL GLAZE	100 5% 1/10W
R88	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R178	1-216-025-00	METAL GLAZE	100 5% 1/10W
R89	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R179	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R90	1-216-025-00	METAL GLAZE	100 5% 1/10W	R180	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R91	1-216-025-00	METAL GLAZE	100 5% 1/10W	R181	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R92	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R182	1-216-025-00	METAL GLAZE	100 5% 1/10W
R93	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R183	1-216-025-00	METAL GLAZE	100 5% 1/10W
R101	1-216-029-00	METAL GLAZE	150 5% 1/10W	R184	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R102	1-216-029-00	METAL GLAZE	150 5% 1/10W	R185	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R103	1-216-029-00	METAL GLAZE	150 5% 1/10W	R186	1-216-025-00	METAL GLAZE	100 5% 1/10W
R104	1-216-029-00	METAL GLAZE	150 5% 1/10W	R187	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R105	1-216-025-00	METAL GLAZE	100 5% 1/10W	R188	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R106	1-216-025-00	METAL GLAZE	100 5% 1/10W	R189	1-216-025-00	METAL GLAZE	100 5% 1/10W
R107	1-216-025-00	METAL GLAZE	100 5% 1/10W	R190	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R109	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R191	1-216-025-00	METAL GLAZE	100 5% 1/10W
R110	1-216-025-00	METAL GLAZE	100 5% 1/10W	R201	1-216-029-00	METAL GLAZE	150 5% 1/10W
R111	1-216-025-00	METAL GLAZE	100 5% 1/10W	R202	1-216-029-00	METAL GLAZE	150 5% 1/10W
R113	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R203	1-216-029-00	METAL GLAZE	150 5% 1/10W
R114	1-216-631-11	METAL CHIP	150 0.50% 1/10W	R204	1-216-029-00	METAL GLAZE	150 5% 1/10W
R115	1-216-631-11	METAL CHIP	150 0.50% 1/10W	R205	1-216-025-00	METAL GLAZE	100 5% 1/10W
R116	1-216-641-11	METAL CHIP	390 0.50% 1/10W	R206	1-216-025-00	METAL GLAZE	100 5% 1/10W
R117	1-216-629-11	METAL CHIP	120 0.50% 1/10W	R207	1-216-025-00	METAL GLAZE	100 5% 1/10W
R118	1-216-645-11	METAL CHIP	560 0.50% 1/10W	R209	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R119	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R210	1-216-025-00	METAL GLAZE	100 5% 1/10W
R120	1-216-025-00	METAL GLAZE	100 5% 1/10W	R211	1-216-025-00	METAL GLAZE	100 5% 1/10W
R121	1-216-025-00	METAL GLAZE	100 5% 1/10W	R213	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R123	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R214	1-216-637-11	METAL CHIP	270 0.50% 1/10W
R124	1-216-025-00	METAL GLAZE	100 5% 1/10W	R215	1-216-607-11	METAL CHIP	15 0.50% 1/10W
R125	1-216-025-00	METAL GLAZE	100 5% 1/10W	R216	1-216-641-11	METAL CHIP	390 0.50% 1/10W
R126	1-216-025-00	METAL GLAZE	100 5% 1/10W	R217	1-216-629-11	METAL CHIP	120 0.50% 1/10W
R128	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R218	1-216-645-11	METAL CHIP	560 0.50% 1/10W
R129	1-216-025-00	METAL GLAZE	100 5% 1/10W	R219	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R130	1-216-025-00	METAL GLAZE	100 5% 1/10W	R220	1-216-025-00	METAL GLAZE	100 5% 1/10W
R132	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R221	1-216-025-00	METAL GLAZE	100 5% 1/10W
R133	1-216-627-11	METAL CHIP	100 0.50% 1/10W	R223	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R134	1-216-627-11	METAL CHIP	100 0.50% 1/10W	R224	1-216-025-00	METAL GLAZE	100 5% 1/10W
R135	1-216-025-00	METAL GLAZE	100 5% 1/10W	R225	1-216-025-00	METAL GLAZE	100 5% 1/10W
R136	1-216-025-00	METAL GLAZE	100 5% 1/10W	R226	1-216-025-00	METAL GLAZE	100 5% 1/10W
R138	1-216-619-11	METAL CHIP	47 0.50% 1/10W	R228	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R139	1-216-619-11	METAL CHIP	47 0.50% 1/10W	R229	1-216-025-00	METAL GLAZE	100 5% 1/10W
R140	1-216-637-11	METAL CHIP	270 0.50% 1/10W	R230	1-216-025-00	METAL GLAZE	100 5% 1/10W
R141	1-216-645-11	METAL CHIP	560 0.50% 1/10W	R232	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R142	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R233	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R143	1-216-025-00	METAL GLAZE	100 5% 1/10W	R234	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R144	1-216-025-00	METAL GLAZE	100 5% 1/10W	R235	1-216-025-00	METAL GLAZE	100 5% 1/10W
R146	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R236	1-216-025-00	METAL GLAZE	100 5% 1/10W
R147	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R238	1-216-619-11	METAL CHIP	47 0.50% 1/10W
R148	1-216-025-00	METAL GLAZE	100 5% 1/10W	R239	1-216-619-11	METAL CHIP	47 0.50% 1/10W
R149	1-216-025-00	METAL GLAZE	100 5% 1/10W	R240	1-216-637-11	METAL CHIP	270 0.50% 1/10W
R150	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R241	1-216-645-11	METAL CHIP	560 0.50% 1/10W
R151	1-216-001-00	METAL GLAZE	10 5% 1/10W				

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R242	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R347	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R243	1-216-025-00	METAL GLAZE	100 5% 1/10W	R348	1-216-025-00	METAL GLAZE	100 5% 1/10W
R244	1-216-025-00	METAL GLAZE	100 5% 1/10W	R349	1-216-025-00	METAL GLAZE	100 5% 1/10W
R246	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R350	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R247	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R351	1-216-001-00	METAL GLAZE	10 5% 1/10W
R248	1-216-025-00	METAL GLAZE	100 5% 1/10W	R352	1-216-001-00	METAL GLAZE	10 5% 1/10W
R249	1-216-025-00	METAL GLAZE	100 5% 1/10W	R353	1-216-029-00	METAL GLAZE	150 5% 1/10W
R250	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R354	1-216-029-00	METAL GLAZE	150 5% 1/10W
R251	1-216-001-00	METAL GLAZE	10 5% 1/10W	R355	1-216-029-00	METAL GLAZE	150 5% 1/10W
R252	1-216-001-00	METAL GLAZE	10 5% 1/10W	R357	1-216-025-00	METAL GLAZE	100 5% 1/10W
R253	1-216-029-00	METAL GLAZE	150 5% 1/10W	R358	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R254	1-216-029-00	METAL GLAZE	150 5% 1/10W	R359	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R255	1-216-029-00	METAL GLAZE	150 5% 1/10W	R401	1-216-029-00	METAL GLAZE	150 5% 1/10W
R257	1-216-025-00	METAL GLAZE	100 5% 1/10W	R402	1-216-029-00	METAL GLAZE	150 5% 1/10W
R258	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R403	1-216-119-00	METAL GLAZE	820K 5% 1/10W
R259	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R404	1-216-119-00	METAL GLAZE	820K 5% 1/10W
R270	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R405	1-216-025-00	METAL GLAZE	100 5% 1/10W
R271	1-216-091-00	METAL GLAZE	56K 5% 1/10W	R406	1-216-025-00	METAL GLAZE	100 5% 1/10W
R272	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R407	1-216-025-00	METAL GLAZE	100 5% 1/10W
R273	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R408	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R274	1-216-091-00	METAL GLAZE	56K 5% 1/10W	R409	1-216-025-00	METAL GLAZE	100 5% 1/10W
R275	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R410	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R276	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R411	1-216-041-00	METAL GLAZE	470 5% 1/10W
R277	1-216-091-00	METAL GLAZE	56K 5% 1/10W	R412	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R278	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R413	1-216-033-00	METAL GLAZE	220 5% 1/10W
R301	1-216-029-00	METAL GLAZE	150 5% 1/10W	R414	1-216-031-00	METAL GLAZE	180 5% 1/10W
R302	1-216-029-00	METAL GLAZE	150 5% 1/10W	R415	1-216-043-00	METAL GLAZE	560 5% 1/10W
R303	1-216-029-00	METAL GLAZE	150 5% 1/10W	R416	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R304	1-216-029-00	METAL GLAZE	150 5% 1/10W	R417	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R305	1-216-025-00	METAL GLAZE	100 5% 1/10W	R418	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R306	1-216-025-00	METAL GLAZE	100 5% 1/10W	R419	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R307	1-216-025-00	METAL GLAZE	100 5% 1/10W	R420	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R309	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R421	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R310	1-216-025-00	METAL GLAZE	100 5% 1/10W	R422	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R311	1-216-025-00	METAL GLAZE	100 5% 1/10W	R423	1-216-025-00	METAL GLAZE	100 5% 1/10W
R313	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R424	1-216-029-00	METAL GLAZE	150 5% 1/10W
R314	1-216-633-11	METAL CHIP	180 0.50% 1/10W	R425	1-216-029-00	METAL GLAZE	150 5% 1/10W
R315	1-216-631-11	METAL CHIP	150 0.50% 1/10W	R501	1-216-029-00	METAL GLAZE	150 5% 1/10W
R316	1-216-641-11	METAL CHIP	390 0.50% 1/10W	R502	1-216-029-00	METAL GLAZE	150 5% 1/10W
R317	1-216-629-11	METAL CHIP	120 0.50% 1/10W	R503	1-216-119-00	METAL GLAZE	820K 5% 1/10W
R318	1-216-645-11	METAL CHIP	560 0.50% 1/10W	R504	1-216-119-00	METAL GLAZE	820K 5% 1/10W
R319	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R505	1-216-025-00	METAL GLAZE	100 5% 1/10W
R320	1-216-025-00	METAL GLAZE	100 5% 1/10W	R506	1-216-025-00	METAL GLAZE	100 5% 1/10W
R321	1-216-025-00	METAL GLAZE	100 5% 1/10W	R507	1-216-025-00	METAL GLAZE	100 5% 1/10W
R323	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R508	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R324	1-216-025-00	METAL GLAZE	100 5% 1/10W	R509	1-216-025-00	METAL GLAZE	100 5% 1/10W
R325	1-216-025-00	METAL GLAZE	100 5% 1/10W	R510	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R326	1-216-025-00	METAL GLAZE	100 5% 1/10W	R511	1-216-041-00	METAL GLAZE	470 5% 1/10W
R328	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R512	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R329	1-216-025-00	METAL GLAZE	100 5% 1/10W	R513	1-216-033-00	METAL GLAZE	220 5% 1/10W
R330	1-216-025-00	METAL GLAZE	100 5% 1/10W	R514	1-216-031-00	METAL GLAZE	180 5% 1/10W
R332	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R515	1-216-043-00	METAL GLAZE	560 5% 1/10W
R333	1-216-627-11	METAL CHIP	100 0.50% 1/10W	R516	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R334	1-216-627-11	METAL CHIP	100 0.50% 1/10W	R517	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R335	1-216-025-00	METAL GLAZE	100 5% 1/10W	R518	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R336	1-216-025-00	METAL GLAZE	100 5% 1/10W	R519	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R338	1-216-619-11	METAL CHIP	47 0.50% 1/10W	R520	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R339	1-216-619-11	METAL CHIP	47 0.50% 1/10W	R521	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R340	1-216-637-11	METAL CHIP	270 0.50% 1/10W	R522	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R341	1-216-645-11	METAL CHIP	560 0.50% 1/10W	R523	1-216-025-00	METAL GLAZE	100 5% 1/10W
R342	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R524	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R343	1-216-025-00	METAL GLAZE	100 5% 1/10W	R525	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R344	1-216-025-00	METAL GLAZE	100 5% 1/10W	R526	1-216-029-00	METAL GLAZE	150 5% 1/10W
R346	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W				

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R527	1-216-029-00	METAL GLAZE 150 5% 1/10W		C53	1-126-101-11	ELECT 100MF	20% 16V
				C54	1-126-101-11	ELECT 100MF	20% 16V
				C55	1-126-101-11	ELECT 100MF	20% 16V
*****				C56	1-126-101-11	ELECT 100MF	20% 16V
*A-1394-215-A Y BOARD, COMPLETE				C57	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
*****				C58	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
*1-526-659-00 SOCKET, 1C (DP) 28P				C59	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
*1-526-950-11 SOCKET, 1C 64P				C60	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
*1-568-984-11 CONNECTOR, MALE 96P				C61	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
<CAPACITOR>				C62	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C1	1-124-927-11	ELECT 4.7MF	20% 50V	C63	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2	1-124-927-11	ELECT 4.7MF	20% 50V	C64	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C3	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C65	1-163-036-00	CERAMIC CHIP 0.068MF	50V
C4	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C66	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C5	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C67	1-124-119-00	ELECT 330MF	20% 16V
C6	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C68	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C7	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C69	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C8	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C70	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C9	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C71	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C10	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C72	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C11	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C73	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C12	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C74	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C13	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C75	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C14	1-163-036-00	CERAMIC CHIP 0.068MF	50V	C76	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C15	1-163-036-00	CERAMIC CHIP 0.068MF	50V	C77	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C16	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	<DIODE>			
C17	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D1	8-719-971-20	DIODE ERC38-06	
C18	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D2	8-719-971-20	DIODE ERC38-06	
C19	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D3	8-719-104-34	DIODE JS2836	
C20	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D4	8-719-800-60	DIODE TLR214	
C21	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	D5	8-719-911-19	DIODE 1SS119	
C22	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	<IC>			
C23	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC1	8-759-320-49	IC HD64180R1P8	
C24	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC2	8-759-746-99	IC MBM27C512-25	
C25	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC3	8-752-328-19	IC CXK5864BM-12L	
C26	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC4	8-759-748-05	IC UPD28C64C-20	
C27	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC5	8-759-925-80	IC TC74HC14F	
C28	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC6	8-759-206-28	IC TC74HC123F	
C29	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC7	8-759-008-21	IC MC74HC541F	
C30	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC8	8-759-008-21	IC MC74HC541F	
C31	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	IC9	8-759-995-97	IC MB8855-1314N	
C32	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	IC10	8-759-984-56	IC MB670840PF	
C33	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC11	8-759-984-59	IC MB654842UPF	
C34	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC12	8-759-984-58	IC MB671469PF	
C35	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC13	8-759-984-57	IC MB605195PF	
C36	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC14	8-752-322-10	IC CXK5814P-45L	
C37	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC15	8-752-333-84	IC CXK3864-040M	
C38	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC16	8-752-333-85	IC CXK3864-041M	
C39	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC17	8-752-333-86	IC CXK3864-042M	
C40	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC18	8-759-301-24	IC HD10124	
C41	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC19	8-759-301-24	IC HD10124	
C42	1-124-477-11	ELECT 47MF	20% 16V	IC20	8-752-306-51	IC CX23065A	
C43	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	IC21	8-759-911-24	IC SN74S124N	
C44	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC22	8-759-100-93	IC UPC393G2	
C45	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V	IC23	8-759-031-50	IC MC74F00M	
C46	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	IC24	8-759-008-57	IC MC34051P	
C47	1-124-119-00	ELECT 330MF	20% 16V	IC25	8-759-100-93	IC UPC393G2	
C48	1-124-477-11	ELECT 47MF	20% 16V	IC26	8-759-204-94	IC TC74HC00F	
C49	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC27	8-759-925-98	IC SN74HC107NS	
C50	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC28	8-759-204-94	IC TC74HC00F	
C51	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V				
C52	1-126-103-11	ELECT 470MF	20% 16V				

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

HDIH-1200M
RM-1200

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1C29	8-759-206-28	IC TC74HC123F		R41	1-216-037-00	METAL GLAZE 330 5% 1/10W	
		<COIL>		R42	1-216-037-00	METAL GLAZE 330 5% 1/10W	
L1	1-459-155-00	COIL (WITH CORE) 45UH		R43	1-216-037-00	METAL GLAZE 330 5% 1/10W	
L2	1-459-155-00	COIL (WITH CORE) 45UH		R44	1-216-025-00	METAL GLAZE 100 5% 1/10W	
L3	1-459-155-00	COIL (WITH CORE) 45UH		R45	1-216-037-00	METAL GLAZE 330 5% 1/10W	
L4	1-459-155-00	COIL (WITH CORE) 45UH		R46	1-216-037-00	METAL GLAZE 330 5% 1/10W	
		<IC LINK>		R47	1-216-025-00	METAL GLAZE 100 5% 1/10W	
PS1 Δ	1-532-679-00	LINK, IC		R48	1-216-037-00	METAL GLAZE 330 5% 1/10W	
PS2 Δ	1-532-679-00	LINK, IC		R49	1-216-037-00	METAL GLAZE 330 5% 1/10W	
		<TRANSISTOR>		R50	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q1	8-729-230-46	TRANSISTOR 2SA1162-YG		R51	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q2	8-729-271-23	TRANSISTOR 2SC2712		R52	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q3	8-729-230-46	TRANSISTOR 2SA1162-YG		R53	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q4	8-729-230-46	TRANSISTOR 2SA1162-YG		R54	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q5	8-729-271-23	TRANSISTOR 2SC2712		R55	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q6	8-729-271-23	TRANSISTOR 2SC2712		R56	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q7	8-729-271-23	TRANSISTOR 2SC2712		R57	1-216-037-00	METAL GLAZE 330 5% 1/10W	
		<RESISTOR>		R58	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R1	1-216-001-00	METAL GLAZE 10 5% 1/10W		R59	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R2	1-216-001-00	METAL GLAZE 10 5% 1/10W		R60	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R3	1-216-001-00	METAL GLAZE 10 5% 1/10W		R61	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R4	1-216-001-00	METAL GLAZE 10 5% 1/10W		R62	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R5	1-216-001-00	METAL GLAZE 10 5% 1/10W		R63	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R6	1-216-001-00	METAL GLAZE 10 5% 1/10W		R64	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R7	1-216-001-00	METAL GLAZE 10 5% 1/10W		R65	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R8	1-216-001-00	METAL GLAZE 10 5% 1/10W		R66	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R9	1-216-001-00	METAL GLAZE 10 5% 1/10W		R67	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R10	1-216-001-00	METAL GLAZE 10 5% 1/10W		R68	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R11	1-216-001-00	METAL GLAZE 10 5% 1/10W		R69	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R12	1-216-001-00	METAL GLAZE 10 5% 1/10W		R70	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R13	1-216-025-00	METAL GLAZE 100 5% 1/10W		R71	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R14	1-216-025-00	METAL GLAZE 100 5% 1/10W		R72	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R15	1-216-025-00	METAL GLAZE 100 5% 1/10W		R73	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R17	1-216-037-00	METAL GLAZE 330 5% 1/10W		R74	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R18	1-216-025-00	METAL GLAZE 100 5% 1/10W		R75	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R19	1-216-025-00	METAL GLAZE 100 5% 1/10W		R76	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R20	1-216-037-00	METAL GLAZE 330 5% 1/10W		R77	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R21	1-216-025-00	METAL GLAZE 100 5% 1/10W		R78	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R22	1-216-025-00	METAL GLAZE 100 5% 1/10W		R79	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R23	1-216-025-00	METAL GLAZE 100 5% 1/10W		R80	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R24	1-216-037-00	METAL GLAZE 330 5% 1/10W		R81	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R25	1-216-037-00	METAL GLAZE 330 5% 1/10W		R82	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R26	1-216-037-00	METAL GLAZE 330 5% 1/10W		R83	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R27	1-216-025-00	METAL GLAZE 100 5% 1/10W		R84	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R28	1-216-025-00	METAL GLAZE 100 5% 1/10W		R85	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R29	1-216-025-00	METAL GLAZE 100 5% 1/10W		R86	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R30	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W		R87	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R31	1-216-025-00	METAL GLAZE 100 5% 1/10W		R88	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R32	1-216-025-00	METAL GLAZE 100 5% 1/10W		R89	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R33	1-216-037-00	METAL GLAZE 330 5% 1/10W		R90	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R34	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W		R91	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R36	1-216-037-00	METAL GLAZE 330 5% 1/10W		R92	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R37	1-216-025-00	METAL GLAZE 100 5% 1/10W		R93	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R38	1-216-025-00	METAL GLAZE 100 5% 1/10W		R94	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R39	1-216-037-00	METAL GLAZE 330 5% 1/10W		R95	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R40	1-216-037-00	METAL GLAZE 330 5% 1/10W		R96	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
				R97	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
				R98	1-216-129-00	METAL GLAZE 2.2M 5% 1/10W	
				R99	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
				R100	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
				R101	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
				R102	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
				R103	1-216-085-00	METAL GLAZE 33K 5% 1/10W	

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The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK
R104	1-216-748-11	METAL GLAZE 39K 5% 1/10W	
R105	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
R106	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R107	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R108	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R109	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R110	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R111	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R112	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R113	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R114	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R115	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R116	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R117	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R118	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R119	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R120	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R121	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R122	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R123	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R124	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R125	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R126	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R127	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R128	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R129	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R130	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R131	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R132	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R133	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R134	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R135	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R136	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R137	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R138	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R139	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R140	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R141	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R142	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R143	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R144	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R145	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R146	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R147	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R148	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R149	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R150	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R151	1-216-121-00	METAL GLAZE 1M 5% 1/10W	

<SWITCH>

SW1	1-570-598-11	SWITCH, DIP
SW2	1-570-204-21	SWITCH, KEY BOARD

<CRYSTAL>

X1	1-567-812-11	VIBRATOR, CERAMIC
X2	1-567-252-11	VIBRATOR, CRYSTAL
X3	1-567-192-11	OSCILLATOR, CERAMIC
X4	1-577-353-11	VIBRATOR, CERAMIC

*A-1499-937-A X BOARD, COMPLETE

REF. NO.	PART NO.	DESCRIPTION	REMARK
*1	568-982-11	CONNECTOR, FEMALE 96P	
*1	568-983-11	CONNECTOR, FEMALE 96P	
*1	568-984-11	CONNECTOR, MALE 96P	
*4	353-708-00	HOOK, FINGER	

		M1 BOARD (SOPS1008D)	

	1-543-060-00	CORE	
	9-983-709-01	RUBBER (STB-CR07), RADIATION	
	*2-643-841-01	SHEET, INSULATING	
	*4-873-829-02	HEAT SINK	
<CAPACITOR>			
C108	1-161-743-12	CERAMIC 0.0047MF 400V	
C109	1-125-593-11	ELECT (BLOCK) 2000MF 20% 250V	
C110	1-125-593-11	ELECT (BLOCK) 2000MF 20% 250V	
C111	1-125-593-11	ELECT (BLOCK) 2000MF 20% 250V	
C112	1-125-593-11	ELECT (BLOCK) 2000MF 20% 250V	
C114	1-136-626-11	FILM 1MF 10% 250V	
C115	1-136-626-11	FILM 1MF 10% 250V	
C116	1-136-626-11	FILM 1MF 10% 250V	
C117	1-136-626-11	FILM 1MF 10% 250V	
C118	1-161-915-00	CERAMIC 0.001MF 10% 500V	
C119	1-161-915-00	CERAMIC 0.001MF 10% 500V	
C120	1-136-202-11	FILM 0.33MF 5% 400V	
C121	1-136-202-11	FILM 0.33MF 5% 400V	
C122	1-161-741-00	CERAMIC 0.001MF 10% 400V	
C124	1-161-743-12	CERAMIC 0.0047MF 400V	
C125	1-161-743-12	CERAMIC 0.0047MF 400V	
C126	1-161-743-12	CERAMIC 0.0047MF 400V	
C201	1-161-909-91	CERAMIC 330PF 10% 500V	
C202	1-161-909-91	CERAMIC 330PF 10% 500V	
C203	1-161-909-91	CERAMIC 330PF 10% 500V	
C204	1-161-909-91	CERAMIC 330PF 10% 500V	
C205	1-162-558-11	CERAMIC 100PF 10% 2KV	
C206	1-162-558-11	CERAMIC 100PF 10% 2KV	
C207	1-162-558-11	CERAMIC 100PF 10% 2KV	
C208	1-162-558-11	CERAMIC 100PF 10% 2KV	
C209	1-162-131-11	CERAMIC 220PF 10% 2KV	
C210	1-162-131-11	CERAMIC 220PF 10% 2KV	
C211	1-162-131-11	CERAMIC 220PF 10% 2KV	
C212	1-162-131-11	CERAMIC 220PF 10% 2KV	
C213	1-126-911-11	ELECT 47MF 0 200V	
C214	1-126-911-11	ELECT 47MF 0 200V	
C215	1-126-913-11	ELECT 220MF 0 160V	
C216	1-126-913-11	ELECT 220MF 0 160V	
C217	1-126-912-11	ELECT 33MF 0 250V	
C218	1-126-913-11	ELECT 220MF 0 160V	
C219	1-136-153-00	MYLAR 0.01MF 10% 50V	
C221	1-136-163-00	MYLAR 0.068MF 10% 50V	
C222	1-136-155-00	MYLAR 0.015MF 10% 50V	
C223	1-136-155-00	MYLAR 0.015MF 10% 50V	
C224	1-126-911-11	ELECT 47MF 0 200V	
C225	1-123-875-11	ELECT 10MF 20% 50V	
C226	1-124-478-11	ELECT 100MF 20% 25V	

The components identified by shading and mark **Δ** are critical for safety.
Replace only with part number specified.

HDIH-1200M
RM-1200

M1

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C227	1-124-443-00	ELECT	100MF 20% 10V	<COIL>			
C228	1-136-165-00	MYLAR	0.1MF 10% 50V	L104	1-424-058-11	LFT	
C229	1-136-165-00	MYLAR	0.1MF 10% 50V	L201	1-412-263-11	COIL, CHOKE (CCLU160708Z) 20.5MMH	
C230	1-124-902-00	ELECT	0.47MF 20% 50V	L202	1-412-264-11	COIL, CHOKE (CCL U270817Z) 1.4MMH	
C231	1-161-925-00	CERAMIC	100PF 10% 500V	L203	1-408-949-11	COIL (WITH CORE) (CHOKE COIL.)	
C232	1-161-925-00	CERAMIC	100PF 10% 500V	L204	1-421-370-00	COIL, CHOKE	
<CONNECTOR>				<TRANSISTOR>			
CN103	*1-535-419-00	TAB, FASTEN (PCB)		Q101	1-807-107-11	TRANSISTOR 2SK827	
CN104	*1-535-419-00	TAB, FASTEN (PCB)		Q102	1-807-107-11	TRANSISTOR 2SK827	
CN106	*1-560-549-00	PIN (WITH V CONNECTOR BASE) 3P		Q103	1-807-107-11	TRANSISTOR 2SK827	
CN107	*1-535-419-00	TAB, FASTEN (PCB)		Q104	1-807-107-11	TRANSISTOR 2SK827	
CN108	*1-535-419-00	TAB, FASTEN (PCB)		Q105	8-729-113-33	TRANSISTOR 2SB733-4	
CN109	*1-535-419-00	TAB, FASTEN (PCB)		Q106	8-729-113-33	TRANSISTOR 2SB733-4	
CN110	*1-535-419-00	TAB, FASTEN (PCB)		Q201	8-729-821-53	TRANSISTOR 2SC3042-N	
CN111	*1-535-419-00	TAB, FASTEN (PCB)		Q202	8-729-105-97	TRANSISTOR 2SA1156-2K	
CN202	*1-560-894-00	PIN, CONNECTOR 6P		Q203	8-729-175-22	TRANSISTOR 2SC2752 -L	
<DIODE>				Q204	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D101	Δ 8-719-500-27	DIODE S15VB60		Q205	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D102	1-807-913-21	DIODE 11EQS04		Q206	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D103	1-807-913-21	DIODE 11EQS04		Q207	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D201	8-719-971-20	DIODE ERC38-06		Q208	8-729-208-04	TRANSISTOR 2SK422	
D202	8-719-971-20	DIODE ERC38-06		Q209	8-729-208-04	TRANSISTOR 2SK422	
D203	8-719-971-20	DIODE ERC38-06		<RESISTOR>			
D204	8-719-971-20	DIODE ERC38-06		R102	Δ 1-205-916-11	WIREWOUND	5 5% 20W F
D205	8-719-979-28	DIODE ESAD39-06C		R103	Δ 1-205-916-11	WIREWOUND	5 5% 20W F
D206	8-719-979-29	DIODE ESAD39-06N		R104	1-205-624-00	WIREWOUND	100 5% 5W F
D207	8-719-911-55	DIODE U05G		R105	1-247-696-11	CARBON	47 5% 1/4W F
D208	8-719-911-55	DIODE U05G		R106	1-247-696-11	CARBON	47 5% 1/4W F
D209	8-719-109-89	DIODE RD5.GES-B2		R107	1-247-696-11	CARBON	47 5% 1/4W F
D210	8-719-911-19	DIODE 1SS119		R108	1-247-696-11	CARBON	47 5% 1/4W F
D211	8-719-911-19	DIODE 1SS119		R109	1-249-421-11	CARBON	2.2K 5% 1/4W
D213	8-719-110-88	DIODE RD39ES-B2		R110	1-249-421-11	CARBON	2.2K 5% 1/4W
D214	8-719-110-88	DIODE RD39ES-B2		R111	1-205-624-00	WIREWOUND	100 5% 5W F
D215	8-719-911-19	DIODE 1SS119		R201	1-205-625-00	WIREWOUND	220 5% 5W F
D216	8-719-911-19	DIODE 1SS119		R202	1-205-625-00	WIREWOUND	220 5% 5W F
D218	8-719-912-20	DIODE 1SS120		R203	1-249-429-11	CARBON	10K 5% 1/4W
D219	8-719-912-20	DIODE 1SS120		R204	1-249-441-11	CARBON	100K 5% 1/4W
D220	8-719-911-19	DIODE 1SS119		R205	1-249-441-11	CARBON	100K 5% 1/4W
<FUSE>				R206	1-249-405-11	CARBON	100 5% 1/4W
F103	Δ 1-532-496-11	FUSE, THERMO 10A/250V		R207	1-249-417-11	CARBON	1K 5% 1/4W
<IC>				R208	1-215-477-00	METAL	220K 1% 1/6W
IC201	8-759-135-80	IC UPC358C		R209	1-215-477-00	METAL	220K 1% 1/6W
IC202	8-759-908-15	IC TL431CLP		R210	1-215-445-00	METAL	10K 1% 1/6W
IC203	8-759-135-80	IC UPC358C		R212	1-205-676-11	WIREWOUND	4.7 5% 5W F
IC204	8-759-908-15	IC TL431CLP		R213	1-215-477-00	METAL	220K 1% 1/6W
				R214	1-215-477-00	METAL	220K 1% 1/6W
				R215	1-215-445-00	METAL	10K 1% 1/6W
				R216	1-249-424-11	CARBON	3.9K 5% 1/4W
				R217	1-247-887-00	CARBON	220K 5% 1/4W
				R218	1-247-887-00	CARBON	220K 5% 1/4W
				R219	1-247-895-00	CARBON	470K 5% 1/4W
				R220	1-247-903-00	CARBON	1M 5% 1/4W
				R221	1-249-419-11	CARBON	1.5K 5% 1/4W
				R222	1-249-417-11	CARBON	1K 5% 1/4W
				R223	1-249-426-11	CARBON	5.6K 5% 1/4W

DIH-1200M
RM-1200

• * : Selected to yield optimum performance.

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

M1

C1

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R224	1-249-425-11	CARBON	4.7K 5% 1/4W	<CAPACITOR>			
R226	1-247-747-11	CARBON	470 5% 1/2W F	C51	1-130-471-00	MYLAR 0.001MF 10% 50V	
R227	1-247-747-11	CARBON	470 5% 1/2W F	C52	1-130-471-00	MYLAR 0.001MF 10% 50V	
R228	1-215-431-00	METAL	2.7K 1% 1/6W	C53	1-124-902-00	ELECT 0.47MF 20% 50V	
* R229	1-215-456-00	METAL	30K 1% 1/6W	C54	1-124-478-11	ELECT 100MF 20% 25V	
* R229	1-215-457-00	METAL	33K 1% 1/6W	C56	1-136-153-00	MYLAR 0.01MF 10% 50V	
* R229	1-215-458-00	METAL	36K 1% 1/6W	C57	1-136-165-00	MYLAR 0.1MF 10% 50V	
* R229	1-215-459-00	METAL	39K 1% 1/6W	C58	1-124-910-11	ELECT 47MF 20% 50V	
* R229	1-215-460-00	METAL	43K 1% 1/6W	C59	1-124-902-00	ELECT 0.47MF 20% 50V	
* R229	1-215-461-00	METAL	47K 1% 1/6W	<CONNECTOR>			
* R229	1-215-462-00	METAL	51K 1% 1/6W	CN51	*1-560-741-00	PIN, CONNECTOR 12P	
* R229	1-215-463-00	METAL	56K 1% 1/6W	CN52	*1-564-517-11	PLUG, CONNECTOR 2P	
* R229	1-215-464-00	METAL	62K 1% 1/6W	<DIODE>			
R230	1-249-426-11	CARBON	5.6K 5% 1/4W	D51	1-807-913-21	DIODE 11EQS04	
R231	1-249-426-11	CARBON	5.6K 5% 1/4W	D52	1-807-913-21	DIODE 11EQS04	
R232	1-215-473-00	METAL	150K 1% 1/6W	D53	1-807-913-21	DIODE 11EQS04	
R233	1-215-441-00	METAL	6.8K 1% 1/6W	D54	1-807-913-21	DIODE 11EQS04	
R234	1-215-469-00	METAL	100K 1% 1/6W	D55	1-807-913-21	DIODE 11EQS04	
R235	1-215-469-00	METAL	100K 1% 1/6W	D56	1-807-913-21	DIODE 11EQS04	
R236	1-215-436-00	METAL	4.3K 1% 1/6W	D57	8-719-911-19	DIODE 1SS119	
R237	1-215-902-11	METAL OXIDE	47K 5% 2W F	D58	8-719-107-87	THYRISTOR 03P2M	
R238	1-215-902-11	METAL OXIDE	47K 5% 2W F	D59	8-719-911-19	DIODE 1SS119	
R239	1-205-625-00	WIREWOUND	220 5% 5W F	<IC>			
R240	1-205-625-00	WIREWOUND	220 5% 5W F	IC51	8-759-906-62	IC MB3759-SNY	
R241	1-249-432-11	CARBON	18K 5% 1/4W	<COIL>			
R242	1-249-426-11	CARBON	5.6K 5% 1/4W	L51	1-410-466-41	INDUCTOR 4.7UH	
R243	1-249-431-11	CARBON	15K 5% 1/4W	<TRANSISTOR>			
R244	1-249-413-11	CARBON	470 5% 1/4W	Q53	8-729-119-76	TRANSISTOR 2SA1175-HFE	
R245	1-249-431-11	CARBON	15K 5% 1/4W	<RESISTOR>			
R246	1-247-893-11	CARBON	390K 5% 1/4W	R51	1-249-410-11	CARBON 270 5% 1/4W	
R247	1-215-465-00	METAL	68K 1% 1/6W	R52	1-249-417-11	CARBON 1K 5% 1/4W	
R248	1-215-433-00	METAL	3.3K 1% 1/6W	R53	1-249-417-11	CARBON 1K 5% 1/4W	
R249	1-215-465-00	METAL	68K 1% 1/6W	R54	1-249-417-11	CARBON 1K 5% 1/4W	
R250	1-215-465-00	METAL	68K 1% 1/6W	R56	1-249-433-11	CARBON 22K 5% 1/4W	
R251	1-215-433-00	METAL	3.3K 1% 1/6W	R57	1-247-897-11	CARBON 560K 5% 1/4W	
R252	1-215-447-00	METAL	12K 1% 1/6W	R58	1-249-437-11	CARBON 47K 5% 1/4W	
R253	1-215-447-00	METAL	12K 1% 1/6W	R59	1-249-405-11	CARBON 100 5% 1/4W	
R254	1-215-409-00	METAL	330 1% 1/6W	R60	1-247-885-00	CARBON 180K 5% 1/4W	
R255	1-216-377-11	METAL OXIDE	4.7 5% 2W F	R61	1-249-421-11	CARBON 2.2K 5% 1/4W	
<VARIABLE RESISTOR>				R62	1-249-421-11	CARBON 2.2K 5% 1/4W	
RV201	1-228-990-00	RES, ADJ, METAL GLAZE 1K		R63	1-249-421-11	CARBON 2.2K 5% 1/4W	
RV202	1-228-990-00	RES, ADJ, METAL GLAZE 1K		R64	1-247-895-00	CARBON 470K 5% 1/4W	
<RELAY>				R65	1-249-425-11	CARBON 4.7K 5% 1/4W	
RY101A	1-515-450-12	RELAY, POWER		R66	1-249-426-11	CARBON 5.6K 5% 1/4W	
<TRANSFORMER>				R67	1-249-425-11	CARBON 4.7K 5% 1/4W	
T101A	1-449-845-11	TRANSFORMER, CONVERTER		R68	1-249-415-11	CARBON 680 5% 1/4W	
T102A	1-421-819-11	TRANSFORMER, CURRENT		R69	1-249-405-11	CARBON 100 5% 1/4W	
T103A	1-437-188-11	TRANSFORMER, DRIVE		R70	1-249-421-11	CARBON 2.2K 5% 1/4W	
T104A	1-437-188-11	TRANSFORMER, DRIVE		R71	1-215-469-00	METAL 100K 1% 1/6W	
<ARRESTER>							
VZ101A	1-576-084-11	ARRESTER, GUS TUBE (M2P-470L)					

C1 BOARD (SOPS1008D)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*****				C293	1-161-925-00	CERAMIC 100PF	10% 500V
M2 BOARD (SOPS1008D)				C294	1-161-925-00	CERAMIC 100PF	10% 500V
*****				C295	1-161-925-00	CERAMIC 100PF	10% 500V
1-543-060-00 CORE				C296	1-161-925-00	CERAMIC 100PF	10% 500V
<CAPACITOR>				C297	1-161-925-00	CERAMIC 100PF	10% 500V
C151	1-125-592-11	ELECT (BLOCK) 270MF	20% 400V	C298	1-161-925-00	CERAMIC 100PF	10% 500V
C152	1-136-626-11	FILM 1MF	10% 250V	<CONNECTOR>			
C153	1-136-626-11	FILM 1MF	10% 250V	CN151	*1-560-549-00	PIN (WITH V CONNECTOR BASE) 3P	
C154	1-161-915-00	CERAMIC 0.001MF	10% 500V	CN252	*1-560-894-00	PIN, CONNECTOR 6P	
C155	1-161-915-00	CERAMIC 0.001MF	10% 500V	CN254	*1-560-891-00	PIN, CONNECTOR 3P	
C156	1-136-199-00	FILM 0.1MF	10% 400V	CN255	*1-560-891-00	PIN, CONNECTOR 3P	
C157	1-136-161-00	MYLAR 0.047MF	10% 50V	<DIODE>			
C158	1-130-475-00	MYLAR 0.0022MF	10% 50V	D151	1-807-913-21	DIODE 11EQS04	
C165	1-126-233-11	ELECT 22MF	20% 25V	D152	1-807-913-21	DIODE 11EQS04	
C166	1-136-626-11	FILM 1MF	10% 250V	D153	8-719-300-70	DIODE RH-1C	
C167	1-136-626-11	FILM 1MF	10% 250V	D154	8-719-912-20	DIODE ISS120	
C168	1-136-202-11	FILM 0.33MF	5% 400V	D155	8-719-912-20	DIODE ISS120	
C169	1-136-202-11	FILM 0.33MF	5% 400V	D156	8-719-109-89	DIODE RD5.6ES-B2	
C170	1-161-741-00	CERAMIC 0.001MF	10% 400V	D158	8-719-912-20	DIODE ISS120	
C251	1-161-915-00	CERAMIC 0.001MF	10% 500V	D159	8-719-912-20	DIODE ISS120	
C252	1-161-915-00	CERAMIC 0.001MF	10% 500V	D251	8-719-302-81	DIODE FMG-24S	
C253	1-161-925-00	CERAMIC 100PF	10% 500V	D252	1-807-793-11	DIODE FML-22S	
C254	1-161-925-00	CERAMIC 100PF	10% 500V	D253	8-719-302-60	DIODE FML-32S	
C255	1-161-925-00	CERAMIC 100PF	10% 500V	D254	1-807-793-21	DIODE FML-22R	
C256	1-161-925-00	CERAMIC 100PF	10% 500V	D255	1-807-793-21	DIODE FML-22R	
C257	1-161-925-00	CERAMIC 100PF	10% 500V	D256	8-719-302-82	DIODE FMG-24R	
C258	1-161-925-00	CERAMIC 100PF	10% 500V	D265	8-719-110-88	DIODE RD39ES-B2	
C259	1-161-925-00	CERAMIC 100PF	10% 500V	D266	8-719-110-88	DIODE RD39ES-B2	
C260	1-161-925-00	CERAMIC 100PF	10% 500V	D267	8-719-200-02	DIODE 10E-2	
C261	1-161-925-00	CERAMIC 100PF	10% 500V	D268	8-719-200-02	DIODE 10E-2	
C262	1-161-925-00	CERAMIC 100PF	10% 500V	D270	8-719-911-19	DIODE ISS119	
C263	1-161-925-00	CERAMIC 100PF	10% 500V	D271	8-719-911-19	DIODE ISS119	
C264	1-161-925-00	CERAMIC 100PF	10% 500V	D272	8-719-911-19	DIODE ISS119	
C265	1-124-473-11	ELECT 1000MF	20% 10V	D273	8-719-911-19	DIODE ISS119	
C266	1-124-473-11	ELECT 1000MF	20% 10V	D274	8-719-911-19	DIODE ISS119	
C267	1-124-636-00	ELECT 3300MF	20% 25V	D275	8-719-911-19	DIODE ISS119	
C268	1-124-636-00	ELECT 3300MF	20% 25V	D276	8-719-109-89	DIODE RD5.6ES-B2	
C269	1-124-913-11	ELECT 470MF	20% 50V	D277	8-719-110-41	DIODE RD15ES-B2	
C270	1-124-913-11	ELECT 470MF	20% 50V	D278	8-719-110-48	DIODE RD18ES-B1	
C271	1-124-472-11	ELECT 470MF	20% 6.3V	D279	8-719-109-97	DIODE RD6.8ES-B2	
C272	1-124-472-11	ELECT 470MF	20% 6.3V	D280	8-719-110-33	DIODE RD12ES-B3	
C273	1-124-480-11	ELECT 470MF	20% 25V	D281	1-807-774-11	DIODE AU02A	
C274	1-124-480-11	ELECT 470MF	20% 25V	D282	1-807-913-21	DIODE 11EQS04	
C275	1-124-122-11	ELECT 100MF	20% 50V	D283	8-719-109-84	DIODE RD5.1ES-B1	
C276	1-124-122-11	ELECT 100MF	20% 50V	D284	8-719-109-97	DIODE RD6.8ES-B2	
C278	1-136-159-00	MYLAR 0.033MF	10% 50V	D285	8-719-911-19	DIODE ISS119	
C279	1-136-155-00	MYLAR 0.015MF	10% 50V	D286	8-719-911-19	DIODE ISS119	
C280	1-136-155-00	MYLAR 0.015MF	10% 50V	<IC>			
C281	1-136-165-00	MYLAR 0.1MF	10% 50V	IC251	8-759-908-15	IC TL431CLP	
C282	1-136-165-00	MYLAR 0.1MF	10% 50V	IC252	8-759-135-80	IC UPC358C	
C283	1-124-442-00	ELECT 330MF	20% 6.3V	IC253	8-759-143-00	IC UPC7805HF	
C284	1-124-556-11	ELECT 2200MF	20% 16V	<COIL>			
C285	1-124-478-11	ELECT 100MF	20% 25V	L151	1-424-058-11	LFT	
C286	1-124-360-00	ELECT 1000MF	20% 16V	L251	1-412-266-11	COIL, CHOKO (CCL U230914Z) 136UH	
C287	1-123-875-11	ELECT 10MF	20% 50V	L252	1-412-266-11	COIL, CHOKO (CCL U230914Z) 136UH	
C288	1-126-103-11	ELECT 470MF	20% 16V	L253	1-412-265-11	COIL, CHOKO (CCL U230914Z) 2.25MMH	
C289	1-124-902-00	ELECT 0.47MF	20% 50V	L254	1-421-465-00	COIL, FERRITE CHOKO 68UH	
C290	1-124-478-11	ELECT 100MF	20% 25V				
C291	1-136-165-00	MYLAR 0.1MF	10% 50V				
C292	1-136-165-00	MYLAR 0.1MF	10% 50V				

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*****				C293	1-161-925-00	CERAMIC 100PF	10% 500V
*****				C294	1-161-925-00	CERAMIC 100PF	10% 500V
*****				C295	1-161-925-00	CERAMIC 100PF	10% 500V
*****				C296	1-161-925-00	CERAMIC 100PF	10% 500V
*****				C297	1-161-925-00	CERAMIC 100PF	10% 500V
*****				C298	1-161-925-00	CERAMIC 100PF	10% 500V
*****				<CONNECTOR>			
*****				CN151	*1-560-549-00	PIN (WITH V CONNECTOR BASE) 3P	
*****				CN252	*1-560-894-00	PIN, CONNECTOR 6P	
*****				CN254	*1-560-891-00	PIN, CONNECTOR 3P	
*****				CN255	*1-560-891-00	PIN, CONNECTOR 3P	
*****				<DIODE>			
*****				D151	1-807-913-21	DIODE 11EQS04	
*****				D152	1-807-913-21	DIODE 11EQS04	
*****				D153	8-719-300-70	DIODE RH-1C	
*****				D154	8-719-912-20	DIODE ISS120	
*****				D155	8-719-912-20	DIODE ISS120	
*****				D156	8-719-109-89	DIODE RD5.6ES-B2	
*****				D158	8-719-912-20	DIODE ISS120	
*****				D159	8-719-912-20	DIODE ISS120	
*****				D251	8-719-302-81	DIODE FMG-24S	
*****				D252	1-807-793-11	DIODE FML-22S	
*****				D253	8-719-302-60	DIODE FML-32S	
*****				D254	1-807-793-21	DIODE FML-22R	
*****				D255	1-807-793-21	DIODE FML-22R	
*****				D256	8-719-302-82	DIODE FMG-24R	
*****				D265	8-719-110-88	DIODE RD39ES-B2	
*****				D266	8-719-110-88	DIODE RD39ES-B2	
*****				D267	8-719-200-02	DIODE 10E-2	
*****				D268	8-719-200-02	DIODE 10E-2	
*****				D270	8-719-911-19	DIODE ISS119	
*****				D271	8-719-911-19	DIODE ISS119	
*****				D272	8-719-911-19	DIODE ISS119	
*****				D273	8-719-911-19	DIODE ISS119	
*****				D274	8-719-911-19	DIODE ISS119	
*****				D275	8-719-911-19	DIODE ISS119	
*****				D276	8-719-109-89	DIODE RD5.6ES-B2	
*****				D277	8-719-110-41	DIODE RD15ES-B2	
*****				D278	8-719-110-48	DIODE RD18ES-B1	
*****				D279	8-719-109-97	DIODE RD6.8ES-B2	
*****				D280	8-719-110-33	DIODE RD12ES-B3	
*****				D281	1-807-774-11	DIODE AU02A	
*****				D282	1-807-913-21	DIODE 11EQS04	
*****				D283	8-719-109-84	DIODE RD5.1ES-B1	
*****				D284	8-719-109-97	DIODE RD6.8ES-B2	
*****				D285	8-719-911-19	DIODE ISS119	
*****				D286	8-719-911-19	DIODE ISS119	
*****				<IC>			
*****				IC251	8-759-908-15	IC TL431CLP	
*****				IC252	8-759-135-80	IC UPC358C	
*****				IC253	8-759-143-00	IC UPC7805HF	
*****				<COIL>			
*****				L151	1-424-058-11	LFT	
*****				L251	1-412-266-11	COIL, CHOKE (CCL U230914Z) 136UH	
*****				L252	1-412-266-11	COIL, CHOKE (CCL U230914Z) 136UH	
*****				L253	1-412-265-11	COIL, CHOKE (CCL U230914Z) 2.25MMH	
*****				L254	1-421-465-00	COIL, FERRITE CHOKE 68UH	

IDIH-1200M
RM-1200

M2

C2

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
L255	1-421-370-00	COIL, CHOKE		R267	1-205-911-11	WIREWOUND	10 5% 5W F
L256	1-421-370-00	COIL, CHOKE		R268	1-247-711-11	CARBON	680 5% 1/4W
L257	1-421-370-00	COIL, CHOKE		R269	1-247-700-11	CARBON	100 5% 1/4W
L258	1-421-370-00	COIL, CHOKE		R270	1-215-430-00	METAL	2.4K 1% 1/6W
L259	1-421-465-00	COIL, FERRITE CHOKE 68UH		R271	1-249-421-11	CARBON	2.2K 5% 1/4W
<IC LINK>				R272	1-249-397-11	CARBON	22 5% 1/4W
PS151A	1-532-605-11	LINK, IC 0.4A		R273	1-249-419-11	CARBON	1.5K 5% 1/4W
PS251A	1-532-679-11	LINK, IC 0.6A		R274	1-249-432-11	CARBON	18K 5% 1/4W
<TRANSISTOR>				R275	1-249-421-11	CARBON	2.2K 5% 1/4W
Q151	1-807-107-11	TRANSISTOR 2SK827		R276	1-249-421-11	CARBON	2.2K 5% 1/4W
	9-983-709-01	RUBBER (STB-CR07), RADIATION; Q151		R277	1-249-421-11	CARBON	2.2K 5% 1/4W
Q152	1-807-107-11	TRANSISTOR 2SK827		R278	1-249-429-11	CARBON	10K 5% 1/4W
	9-983-709-01	RUBBER (STB-CR07), RADIATION; Q152		R279	1-249-429-11	CARBON	10K 5% 1/4W
Q153	8-729-113-33	TRANSISTOR 2SB733-4		R280	1-249-417-11	CARBON	1K 5% 1/4W
				R281	1-249-429-11	CARBON	10K 5% 1/4W
Q154	8-729-113-33	TRANSISTOR 2SB733-4		R282	1-249-429-11	CARBON	10K 5% 1/4W
Q155	8-729-802-08	TRANSISTOR 2SC3150		R283	1-249-431-11	CARBON	15K 5% 1/4W
Q156	8-729-119-78	TRANSISTOR 2SC2785-HFE		R284	1-249-429-11	CARBON	10K 5% 1/4W
Q251	8-729-119-78	TRANSISTOR 2SC2785 HFE		R285	1-249-417-11	CARBON	1K 5% 1/4W
Q252	8-729-188-23	TRANSISTOR 2SD882-P		R286	1-249-429-11	CARBON	10K 5% 1/4W
	9-983-709-01	RUBBER (STB-CR07), RADIATION; Q252		R287	1-249-429-11	CARBON	10K 5% 1/4W
Q253	8-729-119-78	TRANSISTOR 2SC2785-HFE		R288	1-249-431-11	CARBON	15K 5% 1/4W
Q254	8-729-140-97	TRANSISTOR 2SB734 34		R289	1-249-429-11	CARBON	10K 5% 1/4W
Q255	8-729-119-78	TRANSISTOR 2SC2785-HFE		<VARIABLE RESISTOR>			
Q256	8-729-208-04	TRANSISTOR 2SK422		RV251	1-228-990-00	RES, ADJ, METAL GLAZE 1K	
Q257	8-729-208-04	TRANSISTOR 2SK422		<TRANSFORMER>			
Q258	8-729-119-78	TRANSISTOR 2SC2785-HFE		T151A	1-449-846-11	TRANSFORMER, CONVERTER	
Q259	8-729-119-78	TRANSISTOR 2SC2785-HFE		T152A	1-421-819-11	TRANSFORMER, CURRENT	
Q260	8-729-119-78	TRANSISTOR 2SC2785-HFE		T153A	1-437-188-11	TRANSFORMER, DRIVE	
<RESISTOR>				T154A	1-437-188-11	TRANSFORMER, DRIVE	
R151	1-205-622-00	WIREWOUND	33 5% 5W F	T155A	1-449-847-11	TRANSFORMER, CONVERTER	
R152	1-247-696-11	CARBON	47 5% 1/4W F	*****			
R153	1-247-696-11	CARBON	47 5% 1/4W F	C2 BOARD (SOPS1008D)			
R154	1-247-717-11	CARBON	2.2K 5% 1/4W	*****			
R155	1-247-717-11	CARBON	2.2K 5% 1/4W	<CAPACITOR>			
R156	1-215-902-11	METAL OXIDE	47K 5% 2W F	C51	1-130-471-00	MYLAR	0.001MF 10% 50V
R157	1-215-902-11	METAL OXIDE	47K 5% 2W F	C52	1-130-471-00	MYLAR	0.001MF 10% 50V
R158	1-246-539-00	CARBON	560K 5% 1/4W	C53	1-124-902-00	ELECT	0.47MF 20% 50V
R159	1-246-539-00	CARBON	560K 5% 1/4W	C54	1-124-478-11	ELECT	100MF 20% 25V
R160	1-247-733-11	CARBON	33 5% 1/2W	C55	1-130-471-00	FILM	0.001MF 5% 50V
R161	1-247-713-11	CARBON	1K 5% 1/4W	C56	1-130-481-00	MYLAR	0.0068MF 10% 50V
R162	1-249-407-11	CARBON	150 5% 1/4W	C57	1-136-165-00	MYLAR	0.1MF 10% 50V
R163	1-249-390-11	CARBON	5.6 5% 1/4W	C58	1-123-875-11	ELECT	10MF 20% 50V
R164	1-249-405-11	CARBON	100 5% 1/4W	C59	1-123-875-11	ELECT	10MF 20% 50V
R165	1-247-741-11	CARBON	150 5% 1/2W F	<CONNECTOR>			
R166	1-249-393-11	CARBON	10 5% 1/4W	CN51	*1-560-741-00	PIN, CONNECTOR 12P	
R251	1-205-631-00	WIREWOUND	15 5% 5W F	CN52	*1-564-517-11	PLUG, CONNECTOR 2P	
R252	1-205-631-00	WIREWOUND	15 5% 5W F	<DIODE>			
R253	1-216-359-00	METAL OXIDE	6.8 5% 1W	D51	8-719-911-19	DIODE 1SS119	
R254	1-247-747-11	CARBON	470 5% 1/2W	D52	8-719-911-19	DIODE 1SS119	
R255	1-247-747-11	CARBON	470 5% 1/2W	D53	8-719-911-19	DIODE 1SS119	
R256	1-249-434-11	CARBON	27K 5% 1/4W	D54	8-719-911-19	DIODE 1SS119	
R258	1-249-437-11	CARBON	47K 5% 1/4W	D55	1-807-913-21	DIODE 11EQS04	
R259	1-249-435-11	CARBON	33K 5% 1/4W				
R260	1-249-417-11	CARBON	1K 5% 1/4W				
R261	1-215-424-00	METAL	1.3K 1% 1/6W				
R262	1-249-417-11	CARBON	1K 5% 1/4W				
R263	1-215-452-00	METAL	20K 1% 1/6W				
R264	1-249-417-11	CARBON	1K 5% 1/4W				
R265	1-215-448-00	METAL	13K 1% 1/6W				
R266	1-215-420-00	METAL	910 1% 1/6W				

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

HDIH-1200
RM-1:

C:

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D56	1-807-913-21	DIODE 11EQS04		C901	Δ 1-136-951-11	CAP, METALIZED FILM 0.1MF	20% 25V
D57	8-719-911-19	DIODE 1SS119		C902	Δ 1-136-951-11	CAP, METALIZED FILM 0.1MF	20% 25V
D58	8-719-107-87	THYRISTOR 03P2M		C903	Δ 1-136-951-11	CAP, METALIZED FILM 0.1MF	20% 25V
D59	8-719-911-19	DIODE 1SS119		F901	Δ 1-532-325-11	FUSE, TIME-LAG 6.3A/250V	
				R901	1-202-719-00	RES, SOLID 1.00M	10% 1/2W
	<IC>						
IC51	8-759-906-62	IC MB3759-SNY		SW901	Δ 1-572-066-11	SWITCH, SEESAW (AC POWR)	
				T902	Δ 1-944-510-12	HARNES (T)	
	<COIL>			V901	Δ 8-736-323-05	PICTURE TUBE (09MH(R))	
L51	1-410-466-41	INDUCTOR 4.7UH		V902	Δ 8-736-321-05	PICTURE TUBE (09MH(G))	
				V903	Δ 8-736-322-05	PICTURE TUBE (09MH(B))	
	<TRANSISTOR>			*****			
Q53	8-729-119-76	TRANSISTOR 2SA1175-HFE		ACCESSORIES AND PACKING MATERIALS			

	<RESISTOR>			PART NO.	DESCRIPTION	REMARK	
R51	1-249-411-11	CARBON 330 5% 1/4W		A-1470-893-A	COMMANDER ASSY (RM-1200)		
R52	1-249-414-11	CARBON 560 5% 1/4W		*A-1499-937-A	X BOARD, COMPLETE		
R53	1-249-417-11	CARBON 1K 5% 1/4W		1-575-100-11	CABLE, MINIATURE PLUG		
R54	1-249-417-11	CARBON 1K 5% 1/4W		Δ 1-575-175-11	CORD SET, POWER		
R55	1-215-437-00	METAL 4.7K 1% 1/6W		3-750-749-11	MANUAL, INSTRUCTION		
R56	1-247-903-00	CARBON 1M 5% 1/4W		3-750-750-11	MANUAL, INSTRUCTION		
R57	1-247-897-11	CARBON 560K 5% 1/4W		3-751-149-11	INSTALLATION DIAGRAMS		
R58	1-249-433-11	CARBON 22K 5% 1/4W		*4-384-663-01	BAG, PROTECTION		
R59	1-249-417-11	CARBON 1K 5% 1/4W		*4-384-685-02	BAND		
R60	1-249-425-11	CARBON 4.7K 5% 1/4W		*4-396-243-01	ANGLE		
R61	1-249-421-11	CARBON 2.2K 5% 1/4W		*4-396-252-01	JOINT (H)		
R62	1-249-425-11	CARBON 4.7K 5% 1/4W		*4-396-254-01	HANDLE		
R63	1-249-425-11	CARBON 4.7K 5% 1/4W		4-396-260-01	BOLT, SOCKET HEXAGON		
R64	1-247-895-00	CARBON 470K 5% 1/4W		4-396-260-21	BOLT, SOCKET HEXAGON		
R65	1-249-425-11	CARBON 4.7K 5% 1/4W		*4-396-262-01	EYEBOLT		
R66	1-249-423-11	CARBON 3.3K 5% 1/4W		*4-396-287-01	SPACER		
R67	1-249-426-11	CARBON 5.6K 5% 1/4W		*4-396-288-01	BOX, ACCESSORY		
R68	1-249-415-11	CARBON 680 5% 1/4W		*4-396-299-01	SHEET (A), POLYETHYLENE		
R69	1-249-405-11	CARBON 100 5% 1/4W		*4-396-901-01	PALLET		
R70	1-249-421-11	CARBON 2.2K 5% 1/4W		*4-396-902-01	LID		
R71	1-249-427-11	CARBON 6.8K 5% 1/4W		*4-396-903-01	TRAY		
				*4-396-904-01	SLEEVE		
				*4-396-905-01	CUSHION (LOWER)		
				*4-396-908-01	SPACER		
				*4-603-966-01	STOPPER (LARGE), SPEED		

	MISCELLANEOUS						

Δ	1-236-604-11	FILTER BLOCK, NOISE (M3B BOARD)					
Δ	1-238-755-11	RESISTOR ASSY, HIGH-VOLTAGE					
Δ	1-413-484-12	REGULATOR, SWITCHING (SOPS1008D)					
Δ	1-451-355-12	DEFLECTION YOKE (Y636PJ)					
Δ	1-452-429-21	NECK ASSY, PICTURE TUBE (NA366)					
Δ	1-452-487-31	NECK ASSY, PICTURE TUBE (NA363A)					
	1-452-541-11	MAGNET ASSY, FOCUS					
Δ	1-453-108-11	DC BLOCK, HIGH-VOLTAGE					
Δ	1-453-108-31	DC BLOCK, HIGH-VOLTAGE					
	1-533-224-11	HOLDER, FUSE (DIA. 5.2)					
	1-541-702-11	FAN, DC					
	1-541-703-11	FAN, DC					
	*1-555-110-00	CABLE, P-P					
	1-559-865-31	LEAD ASSY, HIGH-VOLTAGE					
Δ	1-560-222-11	INLET 3P					
	1-575-092-11	CONNECTOR ASSY, MULTI 14P					

HDIH-1200M

RM-1200

SONY[®] SERVICE MANUAL


AEP Model
Chassis No. SCC-D16B-A

CORRECTION-1

File this correction with the service manual.

INTRODUCTION

Part No. of the program ROM (IC2) on the Y board was incorrect.
Please use the correct Part No. as below.

 : Indicated corrected portion

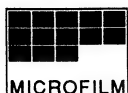
Page 306 : **SECTION 9 ELECTRICAL PARTS LIST**

Incorrect				Correct			
REF.NO.	PART NO.	DISCRIPTION	REMARK	REF.NO.	PART NO.	DISCRIPTION	REMARK
IC2	8-759-746-99	IC MBM27C512-25		IC2	8-759-163-64	IC MBM27C512-20-PJY016	

SUPPLEMENT-1

Page 57 : **SECTION 9 ELECTRICAL PARTS LIST**

Incorrect				Correct			
REF.NO.	PART NO.	DISCRIPTION	REMARK	REF.NO.	PART NO.	DISCRIPTION	REMARK
IC2	8-759-092-89	IC MBM27C512P-20-PJY015		IC2	8-759-163-64	IC MBM27C512-20-PJY016	



9-978-012-91

Sony Corporation
Display Products Group

English
93EL1511-1
Printed in Japan
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HDIH-1200M

RM-1200

SONY SERVICE MANUAL

AEP Model

7074

CORRECTION-2

Correct the service manual as shown below.

File this correction with the service manual.

There were mistaken in the adjustment, therefore correct like below.

✎ : Modification portion

4-13. WHITE BALANCE ADJUSTMENT

2. G2 volume adjustment

- 10) Press the **MEMORY** key.
- ✎ 11) Press the **GAIN** key and adjust the GAIN data with the arrow keys **◀** and **▶** so that R : 96, G : 140, B : 190.
- ✎ 12) Press the **BIAS** key and adjust the BIAS data with the arrow keys **◀** and **▶** so that R : 128, G : 128, B : 128.
- ✎ 13) Press the **TEST** key and display the plug signal on the screen.
- ✎ 14) In a dark room, turn the G2 control to adjust the red, green, and blue signal-color brightnesses this way:
 - Adjust so that 0 IRE (background) is the same brightness as - 5 IRE and so + 5 IRE glows slightly.

< Plug signal >

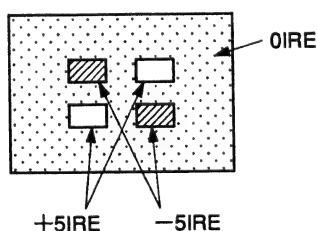


Fig. 27

- ✎ 15) Remove the short on the CF2-3 connector.

4. HDTV1 WHITE BALANCE ADJUSTMENT (6500° K)

- 1) Press the **PAGE** key to select "PAGE 4".
- 2) Press the arrow key to Select "HDTV1"
- 3) Press the **BIAS** (or **GAIN**) key to set to ADJUSTMENT mode.
- 4) Press the arrow keys **◀** and **▶** simultaneously and confirm that the messages are displaying in the screen like the figure.



factory preset data ?

Yes : **▲**

No : **▼**

- 5) Press the arrow key **▲** (This operates memorize the shipment date.)
- 6) Press the **BIAS** key.
- 7) Continuing to press **TEST** key to change the screen in all white signal.
- 8) Minimize the CONT and the BRT.
- 9) Adjust the blue and the red with using color meter. (minolta CS-100 or the like.) so that
 - x : 0.313 ± 0.025
 - y : 0.329 ± 0.025

Must not adjust the GREEN bias by this time.

- 10) Press the **MEMORY** key.
- 11) Press the **GAIN** key.
- 12) Continuing to press the **TEST** key to change the screen in internal signal.
- 13) Press the **RESET** key so that
 - CONT : 80%
 - BRT : 50%
- 14) Adjust the BLUE and the RED with using color meter so that
 - x : 0.313 ± 0.015
 - y : 0.329 ± 0.015

Must not adjust the GREEN GAIN by this time.

- 15) Press the **MEMORY** key.


5. HDTV2 WHITE BALANCE ADJUSTMENT (9300° K)

- 1) Press the **PAGE** key to select "PAGE 4".
- 2) Press the arrow key to select "HDTV2".
- 3) Press the **BIAS** (or **GAIN**) key to set to ADJUSTMENT mode.
- 4) Press the arrow keys **◀** and **▶** simultaneously and confirm that the messages are displaying in the screen like the figure.

factory preset data ?

Yes : **▲**

No : **▼**

- 5) Press the arrow key . (This operates memorize the shipment date.)
- 6) Press the **BIAS** key.
- 7) Continuing to press the **TEST** key to change the screen in all white signal
- 8) Minimize the CONT and the BRT.
- 9) Adjust the BLUE and the RED with using color meter (minolta CS-100 or the like) so that
 $x : 0.284 \pm 0.025$
 $y : 0.297 \pm 0.025$



Must not adjust the GREEN BIAS by this time.

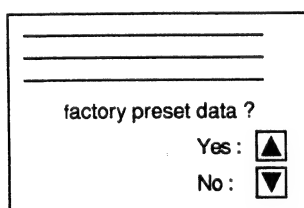
- 10) Press the **MEMORY** key.
- 11) Press the **GAIN** key.
- 12) Continuing to press the **TEST** key to change the screen in internal signal.
- 13) Press the **RESET** key so that
 CONT : 80%
 BRT : 50%
- 14) Adjust the GREEN and the RED with using color meter so that
 $x : 0.284 \pm 0.015$
 $y : 0.297 \pm 0.015$


Must not adjust the BLUE GAIN by this time.

- 15) Press the **MEMORY** key.

6. VID1 WHITE BALANCE ADJUSTMENT (6500° K)

- 1) Press the **PAGE** key to select "PAGE 4".
- 2) Press the arrow key to select "VID1".
- 3) Press the **BIAS** (or **GAIN**) key to set to ADJUSTMENT mode.
- 4) Press the arrow keys  and  simultaneously and confirm that the messages are displaying in the screen like the figure.





- 5) Press the arrow key . (This operates memorize the shipment data)
- 6) Press the **BIAS** key.
- 7) Continuing to press the **TEST** to change the screen in all white signal.
- 8) Minimize the CONT and the BRT.
- 9) Adjust the BLUE and the RED with using color meter. (minolta CS-100 or the like)
 $x : 0.313 \pm 0.025$
 $y : 0.329 \pm 0.025$

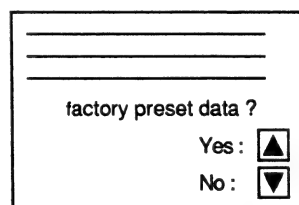
Must not change the GREEN BIAS by this time.


- 10) Press the **MEMORY** key.

- 11) Press the **GAIN** key.
- 12) Continuing to press the **TEST** key to change the screen in internal signal
- 13) Press the **RESET** key so that
 CONT : 80%
 BRT : 50%
- 14) Adjust the BLUE and the RED with using color meter so that
 $x : 0.313 \pm 0.015$
 $y : 0.329 \pm 0.015$
 Must not adjust the GREEN GAIN.
- 15) Press the **MEMORY** key.

7. VID2 WHITE BALANCE ADJUSTMENT (9300° K)

- 1) Press the **PAGE** key to select "PAGE 4".
- 2) Press the arrow key to select "VID2".
- 3) Press the **BIAS** (or **GAIN**) key to set to ADJUSTMENT mode.
- 4) Press the arrow key  and  simultaneously and confirm that the messages are displaying in the screen like the figure.



- 5) Press the arrow key . (This operates memorize the shipment data)
- 6) Press the **BIAS** key.
- 7) Continuing to press the **TEST** key to change the screen in all white signal.
- 8) Minimize the CONT and the BRT.
- 9) Adjust the BLUE and the RED with using color meter (minolta CS-100 or the like) so that
 $x : 0.284 \pm 0.025$
 $y : 0.297 \pm 0.025$
 Must not adjust the GREEN BIAS by this time.
- 10) Press the **MEMORY** key.
- 11) Press the **GAIN** key.
- 12) Continuing to press the **TEST** key to change the screen in internal signal
- 13) Press the **RESET** key so that
 CONT : 80%
 BRT : 50%
- 14) Adjust the GREEN and the RED with using color meter so that
 $x : 0.284 \pm 0.015$
 $y : 0.297 \pm 0.015$
 Most not adjust the BLUE GAIN by this time.
- 15) Press the **MEMORY** key.

HDIH-1200M

RM-1200

SONY[®] SERVICE MANUAL

AEP Model
Chassis No. SCC-D16B-A


+ 7074

CORRECTION-1

File this correction with the service manual.

INTRODUCTION

Part No. of the program ROM (IC2) on the Y board was incorrect.
Please use the correct Part No. as below.

 : Indicated corrected portion

Page 306 : **SECTION 9 ELECTRICAL PARTS LIST**

Incorrect				Correct			
REF.NO.	PART NO.	DISCRIPTION	REMARK	REF.NO.	PART NO.	DISCRIPTION	REMARK
IC2	8-759-746-99	IC MBM27C512-25		IC2	8-759-163-64	IC MBM27C512-20-PJY016	

SUPPLEMENT-1

Page 57 : **SECTION 9 ELECTRICAL PARTS LIST**

Incorrect				Correct			
REF.NO.	PART NO.	DISCRIPTION	REMARK	REF.NO.	PART NO.	DISCRIPTION	REMARK
IC2	8-759-092-89	IC MBM27C512P-20-PJY015		IC2	8-759-163-64	IC MBM27C512-20-PJY016	



9-978-012-91

Sony Corporation
Display Products Group

English
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Printed in Japan
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HDIH-1200M

RM-1200

SONY SERVICE MANUAL

AEP Model
Chassis No. SCC-D16B-A

+ 7074

SUPPLEMENT-1

File this Supplement with the Service Manual.

INTRODUCTION

BA, BB and Y, CA (RG) and CA (B) schematic diagrams alteration.

Note)

Before use, confirm that the part numbers listed below match the part number of the board used in the set.

Board	Board Part. No
BA	1-629-822-14
BB	1-629-823-14
Y	1-629-824-15
CA (RG)	1-629-813-13
CA (B)	1-629-814-13




TABLE OF CONTENTS


Section	Title	Page
7.	DIAGRAMS	3
	Schematic Diagram and Printed Wiring Boards	
	BA Board	4
	BB Board	14
	Y Board	25
	CA (B) Board	32
	CA (RG) Board	37
9.	ELECTRICAL PARTS LIST	43

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.








SECTION 7
DIAGRAMS

Note:

- All capacitors are in μF unless otherwise noted. pF : $\mu\mu F$
- 50WV or less are not indicated except for electrolytics.


Pitch: 5mm

Rating electrical power: $\frac{1}{4}W$






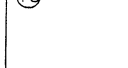










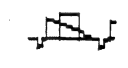

























- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- Δ : internal component.
- : adjustment for repair.
- : panel designation.
- Voltage value is the reference value between it & the earth, when NTSC 3.58 color bar signal is received from color bar generator (digital multi-meter used: 10M ohms/V DC).
- ☆: Displays a list of BB, BA substrate modes.
(PAL, SECAM, NTSC 3.58, NTSC 4.43)
Displays a list of existing voltages, when substrate E has issued a white pattern of internal signals.
- Unit of voltage values is V (volt).
- For other modes, see the respective circuit diagrams.
- : Measurement disabled
- : B+ line
- : B- line
- (Actual measured value may be different).
- Round numerals indicate Waveform Table No.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: *	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

BA BOARD WAVEFORMS

①  PAL 0.9 Vp-p (H) SECAM 0.8 Vp-p (H)	①  PAL 0.9 Vp-p (H) SECAM 0.8 Vp-p (H)	⑦  PAL 0.8 Vp-p (H) SECAM 0.8 Vp-p (H) NTSC3.58 0.9 Vp-p (H)	⑦  PAL 0.8 Vp-p (H) SECAM 0.8 Vp-p (H) NTSC3.58 0.9 Vp-p (H)	⑫  SECAM 0.36 Vp-p (H)	⑬  PAL SECA NTSC S-VI
①  NTSC3.58 0.9 Vp-p (H) NTSC4.43 0.9 Vp-p (H)	②  S-VI 0.8 Vp-p (H)	⑦  NTSC4.43 0.9 Vp-p (H)	⑧  PAL 1.3 Vp-p (H)	⑭  PAL 5.0 Vp-p (H) SECAM 5.0 Vp-p (H) NTSC3.58 5.0 Vp-p (H) NTSC4.43 5.0 Vp-p (H) S-VI 5.0 Vp-p (H)	⑮  PAL SECA
③  PAL 0.8 Vp-p (H) SECAM 0.8 Vp-p (H)	③  NTSC3.58 0.9 Vp-p (H) NTSC4.43 0.9 Vp-p (H)	⑧  SECAM 1.8 Vp-p (H)	⑧  NTSC3.58 1.4 Vp-p (H) NTSC4.43 1.4 Vp-p (H)	⑮  NTSC3.58 1.0 Vp-p (H) NTSC4.43 1.0 Vp-p (H)	⑰  S-VI
③  S-VI 0.8 Vp-p (H)	④  PAL 0.8 Vp-p (H) SECAM 0.8 Vp-p (H)	⑧  S-VI 1.3 Vp-p (H)	⑨  PAL 0.14 Vp-p (H)	⑰  PAL 0.14 Vp-p (H)	⑰  SECAM
④  NTSC3.58 0.9 Vp-p (H) NTSC4.43 0.9 Vp-p (H)	⑤  S-VI 0.5 Vp-p (H)	⑨  SECAM 0.04 Vp-p (H)	⑨  NTSC3.58 0.14 Vp-p (H)	⑰  NTSC3.58 0.14 Vp-p (H)	⑰  NTSC
⑥  PAL 0.8 Vp-p (H) SECAM 0.8 Vp-p (H)	⑥  NTSC3.58 0.8 Vp-p (H)	⑨  NTSC4.43 0.12 Vp-p (H)	⑨  S-VI 0.22 Vp-p (H)	⑰  S-VI 0.22 Vp-p (H)	⑱  PAL SEC, NTSC, S-V
⑥  NTSC4.43 0.9 Vp-p (H)	⑥  S-VI 0.5 Vp-p (H)	⑩  SECAM 1.4 Vp-p (H)	⑪  SECAM 0.2 Vp-p (H)	⑲  PAL 1.9 Vp-p (H) SECAM 1.9 Vp-p (H)	⑲  NTSC, S-V

BA BOARD WAVEFORMS

① PAL 0.9 Vp-p (H) SECAM 0.8 Vp-p (H)	① SECAM 0.8 Vp-p (H) PAL 0.9 Vp-p (H)	⑦ PAL 0.8 Vp-p (H) SECAM 0.8 Vp-p (H)	⑦ NTSC3.58 0.9 Vp-p (H) SECAM 0.8 Vp-p (H)	⑫ SECAM 0.36 Vp-p (H) PAL 5.2 Vp-p (V) SECAM 5.2 Vp-p (V) NTSC3.58 5.2 Vp-p (V) NTSC4.43 5.2 Vp-p (V) S-VI0EO 5.2 Vp-p (V)	⑬ PAL 5.2 Vp-p (V) SECAM 5.2 Vp-p (V) NTSC3.58 5.2 Vp-p (V) NTSC4.43 5.2 Vp-p (V) S-VI0EO 5.2 Vp-p (V)	⑳ PAL 0.9 Vp-p (H) SECAM 0.9 Vp-p (H) NTSC3.58 0.9 Vp-p (H) NTSC4.43 0.9 Vp-p (H) S-VI0EO 0.9 Vp-p (H)	㉑ PAL 11.0 Vp-p (H) SECAM 11.0 Vp-p (H) NTSC3.58 11.0 Vp-p (H) NTSC4.43 11.0 Vp-p (H) S-VI0EO 11.0 Vp-p (H)	㉔ SECAM 1.0 Vp-p (H) NTSC3.58 1.0 Vp-p (H) NTSC4.43 1.0 Vp-p (H) S-VI0EO 1.0 Vp-p (H)	㉕ PAL 1.0 Vp-p (H) SECAM 1.0 Vp-p (H) NTSC3.58 1.0 Vp-p (H) NTSC4.43 1.0 Vp-p (H) S-VI0EO 1.0 Vp-p (H)
① NTSC3.58 0.9 Vp-p (H) NTSC4.43 0.9 Vp-p (H)	② S-VI0EO 0.8 Vp-p (H)	⑦ NTSC4.43 0.9 Vp-p (H)	⑧ PAL 1.3 Vp-p (H)	⑭ PAL 5.0 Vp-p (H) SECAM 5.0 Vp-p (H) NTSC3.58 5.0 Vp-p (H) NTSC4.43 5.0 Vp-p (H) S-VI0EO 5.0 Vp-p (H)	⑮ PAL 0.9 Vp-p (H) SECAM 0.9 Vp-p (H)	㉒ PAL 11.0 Vp-p (H) SECAM 11.0 Vp-p (H) NTSC3.58 11.0 Vp-p (H) NTSC4.43 11.0 Vp-p (H) S-VI0EO 11.0 Vp-p (H)	㉓ PAL 1.8 Vp-p (H)	㉖ PAL 1.0 Vp-p (H) SECAM 1.0 Vp-p (H)	㉗ NTSC3.58 1.0 Vp-p (H) NTSC4.43 1.0 Vp-p (H) S-VI0EO 1.0 Vp-p (H)
③ PAL 0.8 Vp-p (H) SECAM 0.8 Vp-p (H)	③ NTSC3.58 0.9 Vp-p (H) NTSC4.43 0.9 Vp-p (H)	⑧ SECAM 1.8 Vp-p (H)	⑧ NTSC3.58 1.4 Vp-p (H) NTSC4.43 1.4 Vp-p (H)	⑮ NTSC3.58 1.0 Vp-p (H) NTSC4.43 1.0 Vp-p (H)	⑰ S-VI0EO 0.9 Vp-p (H)	㉓ SECAM 1.6 Vp-p (H)	㉓ NTSC3.58 0.36 Vp-p (H) NTSC4.43 0.36 Vp-p (H) S-VI0EO 0.36 Vp-p (H)		
③ S-VI0EO 0.8 Vp-p (H)	④ PAL 0.8 Vp-p (H) SECAM 0.8 Vp-p (H)	⑧ S-VI0EO 1.3 Vp-p (H)	⑨ PAL 0.14 Vp-p (H)	⑰ PAL 0.14 Vp-p (H)	⑰ SECAM 0.05 Vp-p (H)	㉔ PAL 0.34 Vp-p (H) SECAM 0.34 Vp-p (H) NTSC3.58 0.34 Vp-p (H) NTSC4.43 0.34 Vp-p (H) S-VI0EO 0.34 Vp-p (H)	㉔ PAL 0.25 Vp-p (H) SECAM 0.25 Vp-p (H) NTSC3.58 0.25 Vp-p (H) NTSC4.43 0.25 Vp-p (H) S-VI0EO 0.25 Vp-p (H)		
④ NTSC3.58 0.9 Vp-p (H) NTSC4.43 0.9 Vp-p (H)	⑤ S-VI0EO 0.5 Vp-p (H)	⑨ SECAM 0.04 Vp-p (H)	⑨ NTSC3.58 0.14 Vp-p (H)	⑰ NTSC3.58 0.14 Vp-p (H)	⑰ NTSC4.43 0.14 Vp-p (H)	㉔ PAL 1.9 Vp-p (H)	㉔ SECAM 1.6 Vp-p (H)		
⑥ PAL 0.8 Vp-p (H) SECAM 0.8 Vp-p (H)	⑥ NTSC3.58 0.8 Vp-p (H)	⑨ NTSC4.43 0.12 Vp-p (H)	⑨ S-VI0EO 0.22 Vp-p (H)	⑰ S-VI0EO 0.22 Vp-p (H)	⑱ PAL 1.2 Vp-p (H) SECAM 1.2 Vp-p (H) NTSC3.58 1.2 Vp-p (H) NTSC4.43 1.2 Vp-p (H) S-VI0EO 1.2 Vp-p (H)	㉔ NTSC3.58 2.0 Vp-p (H) NTSC4.43 2.0 Vp-p (H) S-VI0EO 2.0 Vp-p (H)	㉔ PAL 0.8 Vp-p (H) SECAM 0.8 Vp-p (H) NTSC3.58 0.8 Vp-p (H) NTSC4.43 0.8 Vp-p (H) S-VI0EO 0.8 Vp-p (H)		
⑥ NTSC4.43 0.9 Vp-p (H)	⑥ S-VI0EO 0.5 Vp-p (H)	⑩ SECAM 1.4 Vp-p (H)	⑪ SECAM 0.2 Vp-p (H)	⑰ PAL 1.9 Vp-p (H) SECAM 1.9 Vp-p (H)	⑰ NTSC3.58 2.0 Vp-p (H) NTSC4.43 2.0 Vp-p (H) S-VI0EO 2.0 Vp-p (H)	㉔ PAL 1.2 Vp-p (H) SECAM 1.2 Vp-p (H) NTSC3.58 1.2 Vp-p (H) NTSC4.43 1.2 Vp-p (H) S-VI0EO 1.2 Vp-p (H)	㉔ PAL 1.0 Vp-p (H)		





Ba

[4-STD DECODER]

- BA BOARD - (COMPONENT SIDE)

IC1	HD14052BP	SYSTEM SW
IC2	TDA4558T1	DECORDER
IC3	CXA1216P	MATRIX
IC4	TDA2595	JUNGLE
IC5	MC14053BF	IDTV SW-1
IC6	TC74HC157AP	IDTV SW-2
IC7	SN74HC27ANS	IDTV SW-3
IC8	NJM78M12A	12V REG
IC9	CX-7916	50/60 DET
IC10	SNY-9202	SHARPNESS
IC11	μ PC4558G2	BRT CONT
IC12	μ PC4558C	LEVEL SHIFT
IC13	SN74HC00ANS	GATE
IC14	MC74HC4538AF	PULSE GENERATOR
Q1	2SC2712	VIDEO BUFF
Q2	2SA1162	Y BUFF-1
Q3	2SA2712	Y AMP-1
Q4	2SA2712	Y AMP-2
Q5	2SA2712	Y AMP-3
Q6	2SC2712	9V REG-1
Q7	2SC2712	C BUFF
Q8	2SC2712	SECAM C BUFF
Q9	2SC2712	PAL C BUFF
Q10	2SC2712	NTSC C BUFF
Q12	DTC144EK	W/B SW-1
Q13	DTC144EK	W/B SW-2
Q14	2SC2712	NT3.58 SW
Q15	2SC2712	NT4.43 SW
Q16	DTC144EK	TRAP SW-1
Q17	DTC144EK	TRAP SW-2
Q18	DTC114EK	POW CONT-1
Q19	DTC114EK	POW CONT-2
Q20	2SC2712	VIDEO BUFF
Q21	2SC2712	Y SW
Q23	2SC2712	Y SW
Q29	2SA1162	VIDEO BUFF
Q30	2SC2712	VIDEO BUFF
Q101	DTC144EK	SECAM SW-1
Q102	2SC2712	SECAM SW-2
Q103	DTC144EK	MODE SW-1
Q104	DTC144EK	MODE SW-2
Q106	DTC144EK	NT OSC SW
Q107	DTC144EK	PAL OSC SW
Q108	DTC144EK	MODE SW-3
Q109	DTC144EK	MODE SW-4
Q201	2SD774	9V REG-2
Q202	2SA1162	B-Y BUFF-1
Q203	2SA1162	R-Y BUFF-1
Q204	2SA1162	AFC-1
Q205	2SC2712	AFC-2
Q206	2SC2712	SYNC BUFF
Q207	2SC2712	V. SYNC SW-1
Q208	2SC2712	V. SYNC SW-2
Q209	2SC2712	V. SYNC SW-3
Q210	2SA1162	V. SYNC SW-4
Q211	2SC2712	H. SYNC SW
Q212	2SK160	Y. CLAMP-1
Q213	2SC2712	Y. BUFF-2
Q214	2SK160	B-Y CLAMP
Q215	2SC2712	R-Y BUFF-2
Q216	2SK160	B-Y CLAMP
Q217	2SC2712	B-Y BUFF-2
Q218	2SA1162	CLAMP
Q219	2SA1162	REF DC BUFF-1
Q220	2SC2712	REF DC BUFF-2
Q221	2SC2712	SCP BUFF
Q222	2SD774	+5V REG
Q223	2SC2712	BGP SHIFT
Q224	DTC144EK	50/60 SW-1
Q225	DTC144EK	50/60 SW-2
Q226	DTC144EK	V. SYNC SW-5
Q230	2SC2712	CLAMP BUFF
Q231	2SC2712	CLAMP BUFF
Q232	2SK160	BRT CONT
Q233	2SC2712	CLAMP BUFF
Q347	DTC144EK	SYSTEM SW-1
Q348	DTC144EK	NT4.43 SW
Q349	DTC144EK	SYSTEM SW-2
Q350	DTC144EK	ID
Q351	2SC2712	Y BUFF-3
Q352	2SC2712	Y CLAMP-2
Q355	2SC2712	BLK BUFF
Q356	DTC144EK	MODE SW-5
Q357	DTC144EK	MODE SW-6
D4	1S2837	NT3.58 DET
D6	RD5.1MB2	POW CONT
D101	1S2837	SECAM SW
D102	1S2837	MODE SW-1
D103	1S2837	MODE SW-2
D201	V06C	+12V PROT
D202	1S2835	SYNC SEP
D203	1S2835	H. SYNC SW
D204	1S2837	BLK ADD
D206	1S2837	W/B SW-2
D207	1S2837	W/B SW-3
D208	RD3.3MB1	W/B SW-1
D209	RD3.3MB1	NT4.43 SW
D210	1S2837	Y. CLAMP

BA BOARD

IC-No.	PIN-No.	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO
001	①	0	0	0	0	-0.3
	②	-0.7	-0.7	0	-0.7	-0.3
	③	-0.7	-0.7	0	-0.7	0
	④	5.1	5.1	5.1	5.1	0
	⑤	4.7	4.7	0	4.7	0
002	⑥	8.6	4.3	7.2	8.1	6.2
	⑦	8.5	4.4	7	7.9	5.9
	⑧	5.9	5.9	7.7	7.7	7.7
	⑨	8.2	7.5	5.9	5.9	5.9
	⑩	0.1	0.1	0	6.1	0
004	⑪	0	0	6.1	0	6.1
	⑫	0.1	6.1	0	0	0
	⑬	6.1	0.1	0	0	0
	⑭	6.6	6.3	6.5	6.6	6.6
	⑮	1.9	2	1.8	2.2	1.8
006	⑯	1.4	0.3	0.9	0.9	0.7
	⑰	1.3	0.2	0.9	0.9	0.6
	⑱	0.3	2.9	0.3	0.3	0.3
	⑲	0	0	5.1	5.2	5.2
	⑳	0	4.3	0	0	0
007	㉑	5.1	0	5.1	5.1	5.1
	㉒	0	5.2	0	0	0
	㉓	0.3	0.3	0.3	0.3	3.4
	㉔	0	0	0	0	0
	㉕	0	0	0	0	0

Q-No.		PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO
007	B	-0.7	-0.7	0	-0.7	-0.3
	C	-	-	-	-	-
	E	-0.7	-1.3	-0.7	-1.3	-1
008	B	0	*	0	0	0
	C	-	-	-	-	-
	E	5	5	5.4	5	5.4
009	B	*	0	0	*	0
	C	-	-	-	-	-
	E	5	5	5.4	5	5.4
010	B	0	0	*	0	8
	C	-	-	-	-	-
	E	4.9	5	5.4	4.9	5.4
012	B	-	-	-	-	-
	C	0	0	4.3	0	4.3
	E	-	-	-	-	-
014	B	0.1	6.1	0.2	0.3	0
	C	-	-	-	-	-
	E	0.3	5.5	0	0.4	0
015	B	0.6	0.1	0.2	5.6	0
	C	-	-	-	-	-
	E	5	1.9	0	5	0
016	B	-	-	-	-	-
	C	0.2	4.1	0.1	0.3	0
	E	-	-	-	-	-
017	B	-	-	-	-	-
	C	3.2	3.6	0	3.2	0
	E	-	-	-	-	-
103	B	6.1	0	0.3	0.2	0
	C	-	-	-	-	-
	E	-	-	-	-	-
104	B	0	0	6.1	0.1	6.1
	C	5.2	5.2	0	5.2	0
	E	-	-	-	-	-
106	B	0	0	6.1	0.1	6.1
	C	12.4	12.4	0	12.4	0
	E	-	-	-	-	-
107	B	5.6	0.1	0.2	5.6	0
	C	0	12.4	12.4	0	12.4
	E	-	-	-	-	-
108	B	0.7	0.5	5.6	5.6	5.6
	C	5.2	5.2	0	0	0
	E	-	-	-	-	-
207	B	-0.1	0	-0.2	0	0
	C	-	-	-	-	-
	E	-	-	-	-	-
220	B	4.3	4.3	4.1	4.3	4.4
	C	4.6	4.7	4.4	4.4	4.4
	E	3.9	5.6	4.2	3.8	3.8
223	B	0	6.1	0.2	0	0
	C	-	-	-	-	-
	E	3.9	5.6	4.2	3.8	3.8
224	B	5.1	5.2	0	0	0
	C	5.2	0	5.1	5.2	5.2
	E	-	-	-	-	-
225	B	0	0	5.1	5.1	5.1
	C	0	4.3	0	0	0
	E	-	-	-	-	-
347	B	0	0	4.3	0	0
	C	4.7	4.7	0	4.7	0
	E	-	-	-	-	-
348	B	0	0	0	4.2	0
	C	0	0	4.3	0	0
	E	-	-	-	-	-
349	B	4.3	4.3	0	0	0
	C	0	0	4.3	0	0
	E	-	-	-	-	-
350	B	0	0	5.1	5.1	5.1
	C	-	-	-	-	-
	E	-	-	-	-	-
355	B	1.1	1.2	1	1.2	1.2
	C	-	-	-	-	-
	E	-	-	-	-	-
357	B	-	-	-	-	-
	C	5.2	5.2	0	0	0
	E	-	-	-	-	-

IC

IC001	E - 10
IC002	B - 10
IC003	C - 4
IC004	B - 7
IC005	C - 1
IC006	B - 1
IC007	A - 1
IC008	D - 7
IC009	B - 3
IC010	C - 6
IC011	C - 5
IC012	E - 3
IC013	B - 2
IC014	C - 2

TRANSISTOR

Q201	B - 5
Q202	B - 3
Q222	B - 6

DIODE

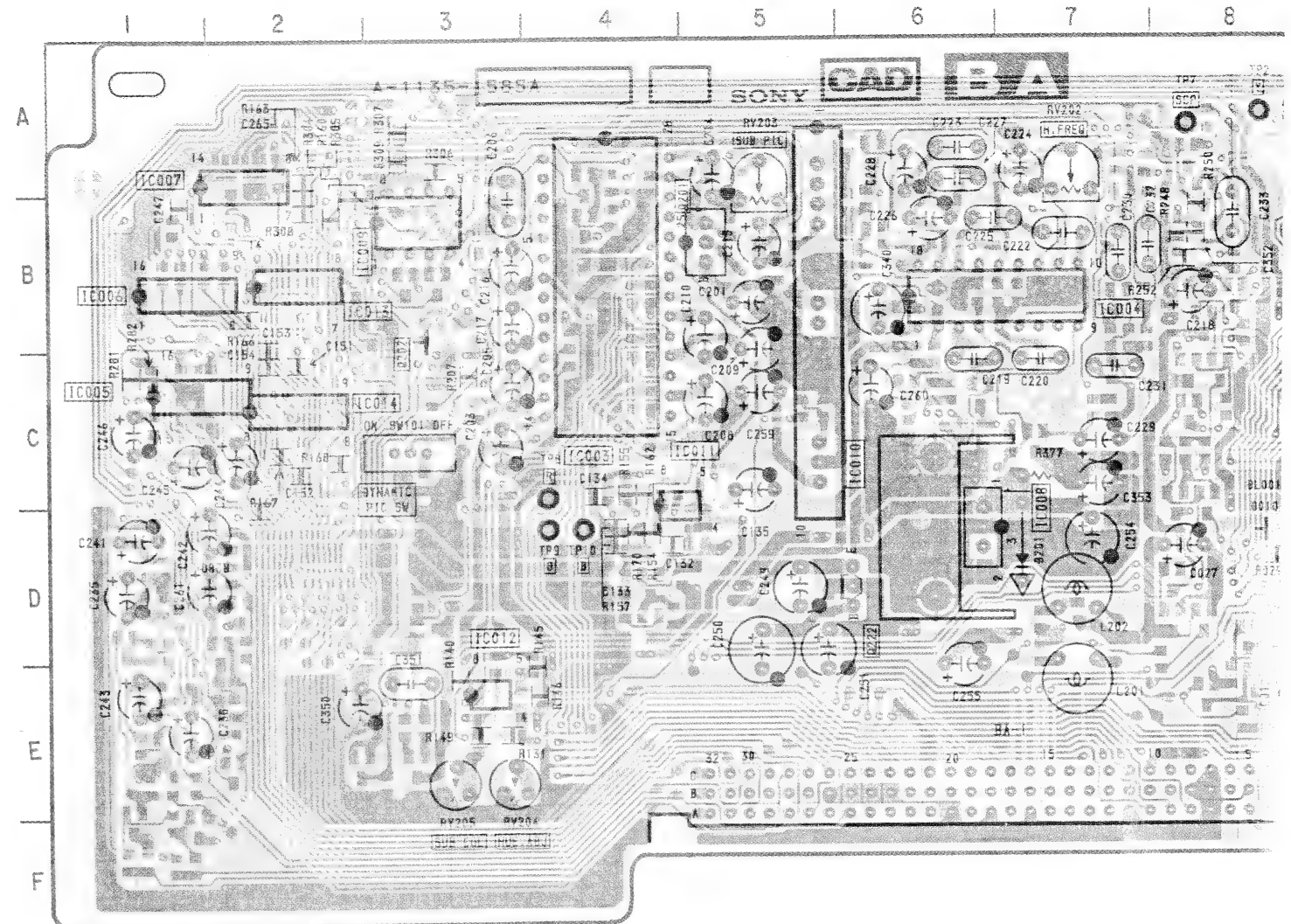
D010	D - 8
D201	D - 7

VARIABLE RESISTOR

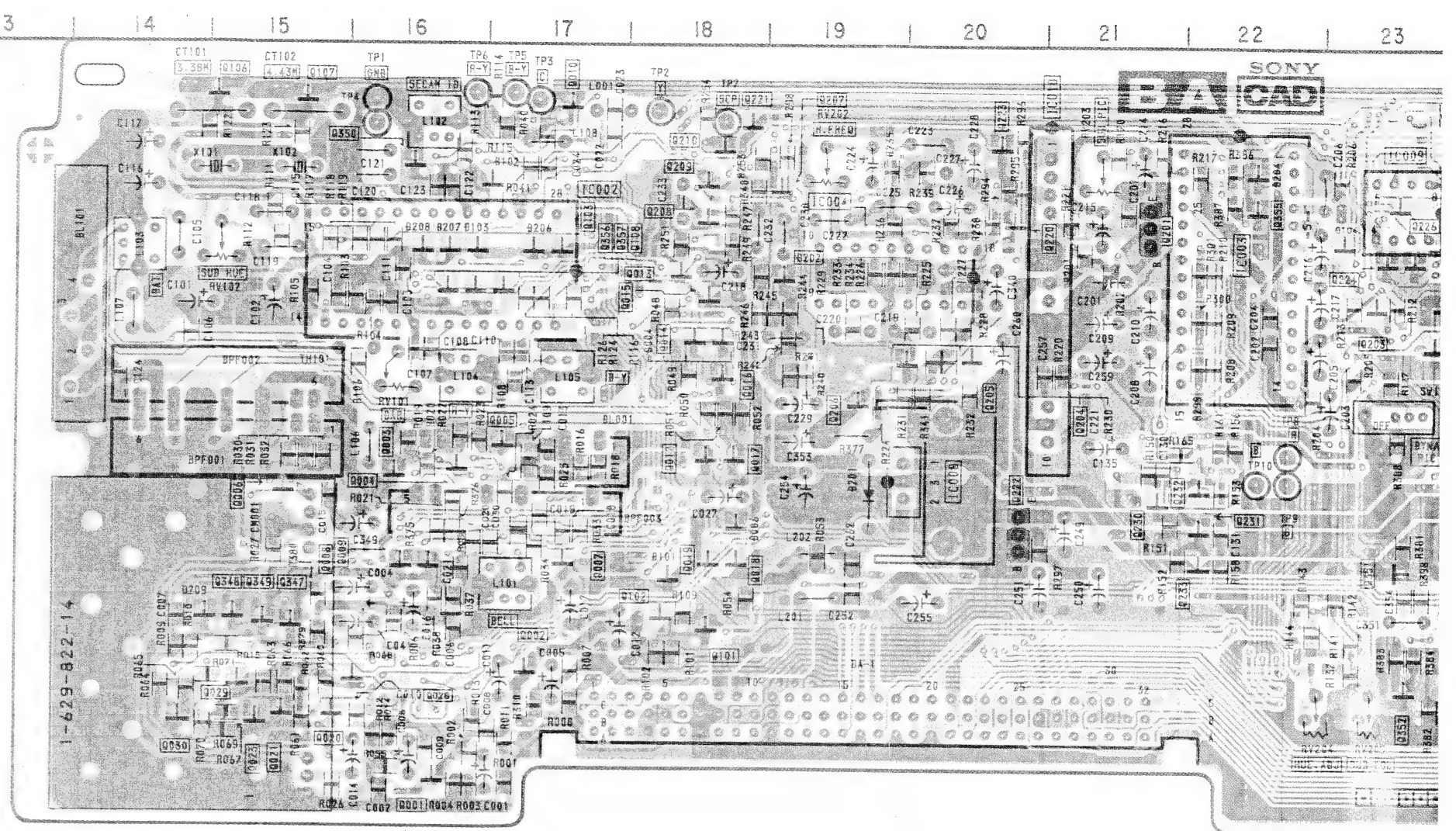
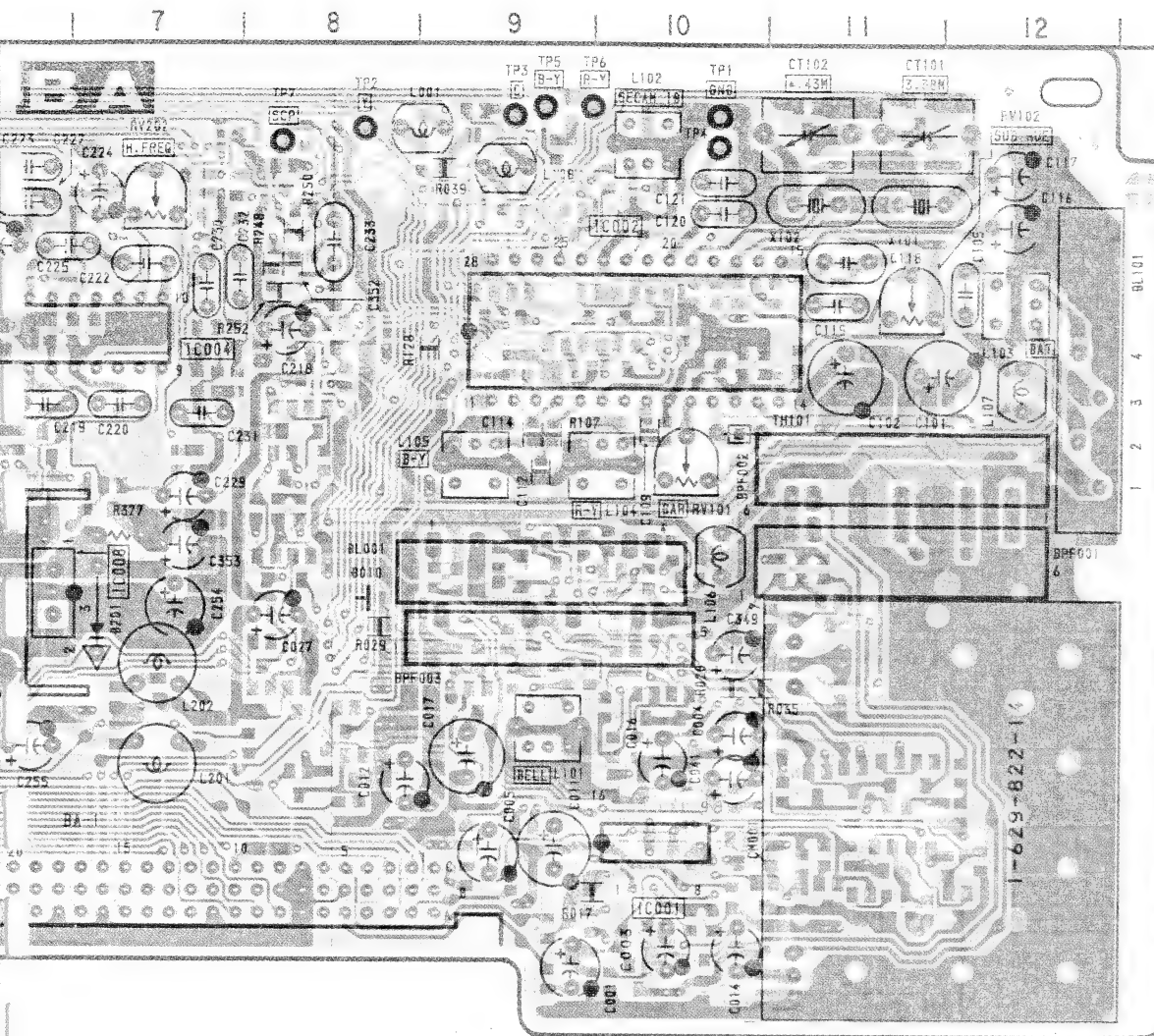
RV101	C - 10
RV102	A - 12
RV202	A - 7
RV203	A - 5
RV204	E - 3
RV205	E - 3

TP

TP1	A - 10
TP2	A - 8
TP3	A - 9
TP4	A - 10
TP5	A - 9
TP6	A - 9
TP7	A - 8
TP8	C - 4
TP9	D - 4
TP10	D - 4



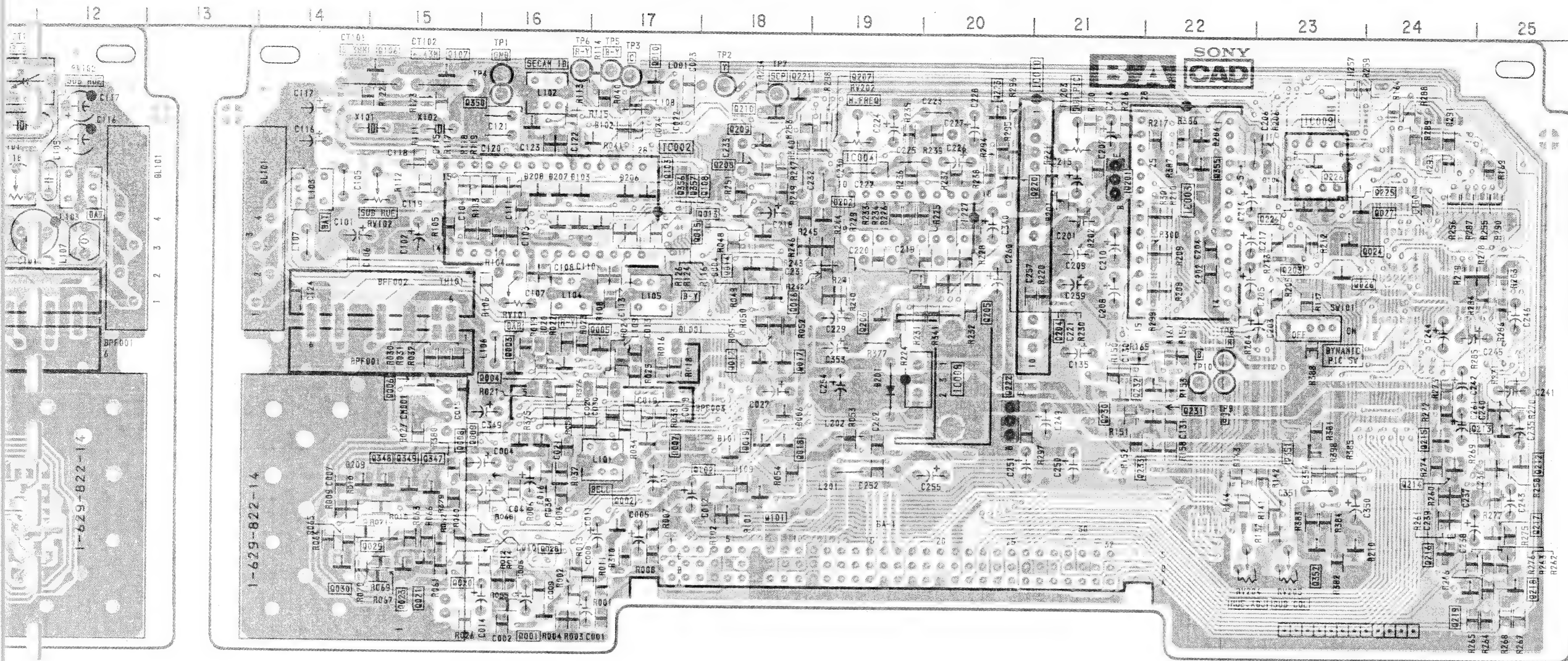
(CONDUCTOR SIDE)





Note:

- : Pattern from
- : Pattern of th

(CONDUCTOR SIDE)

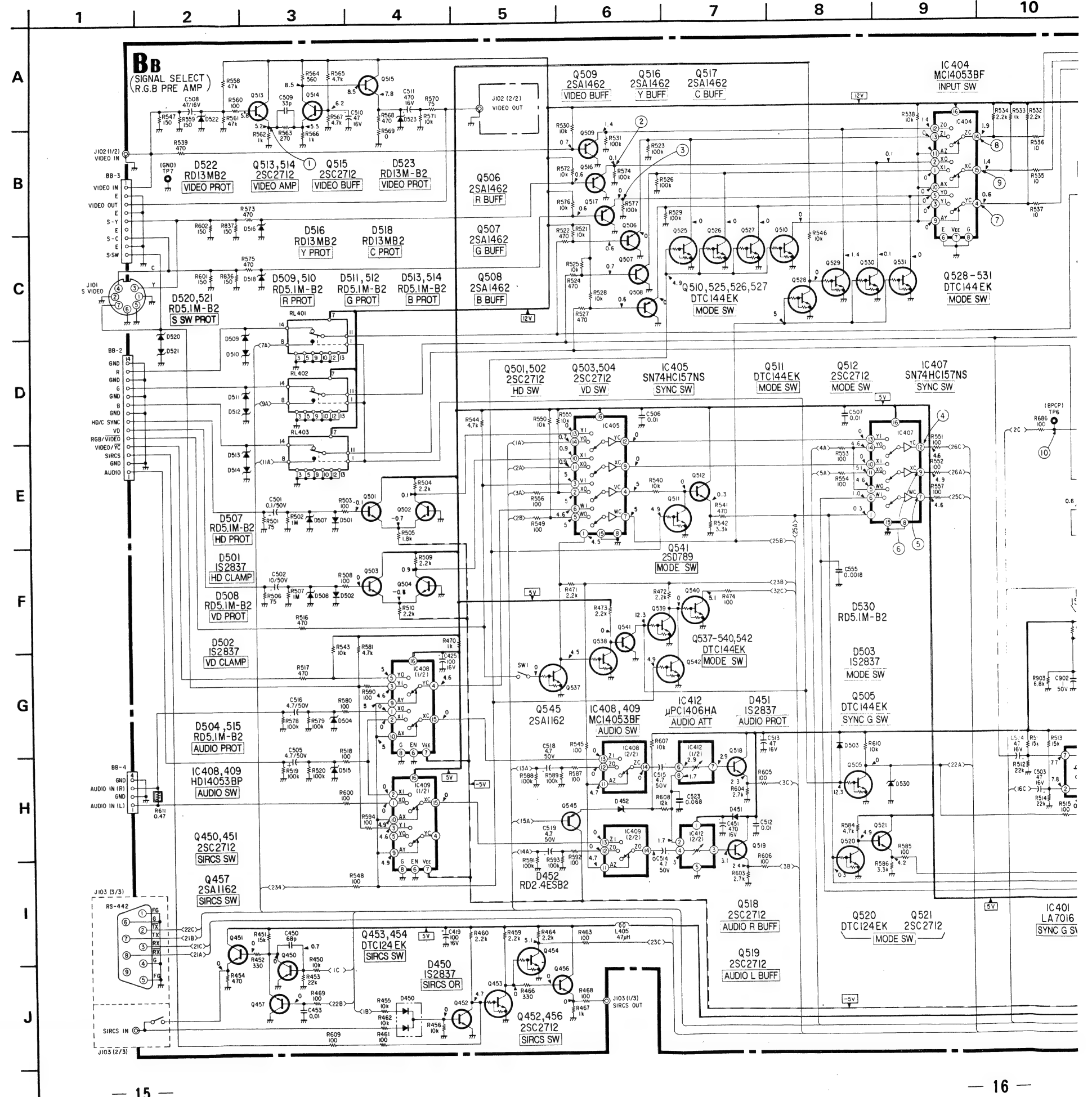
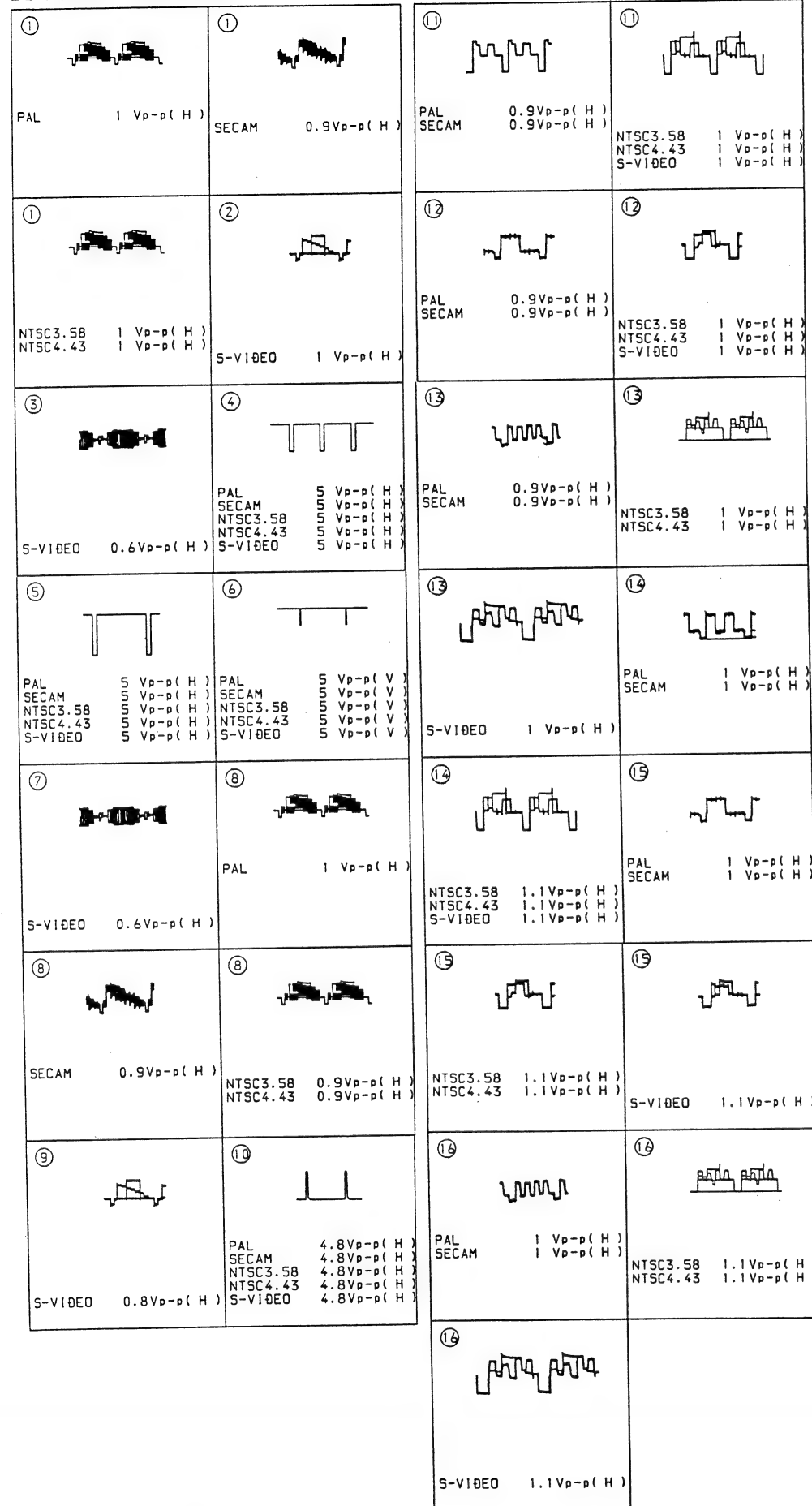


Note :

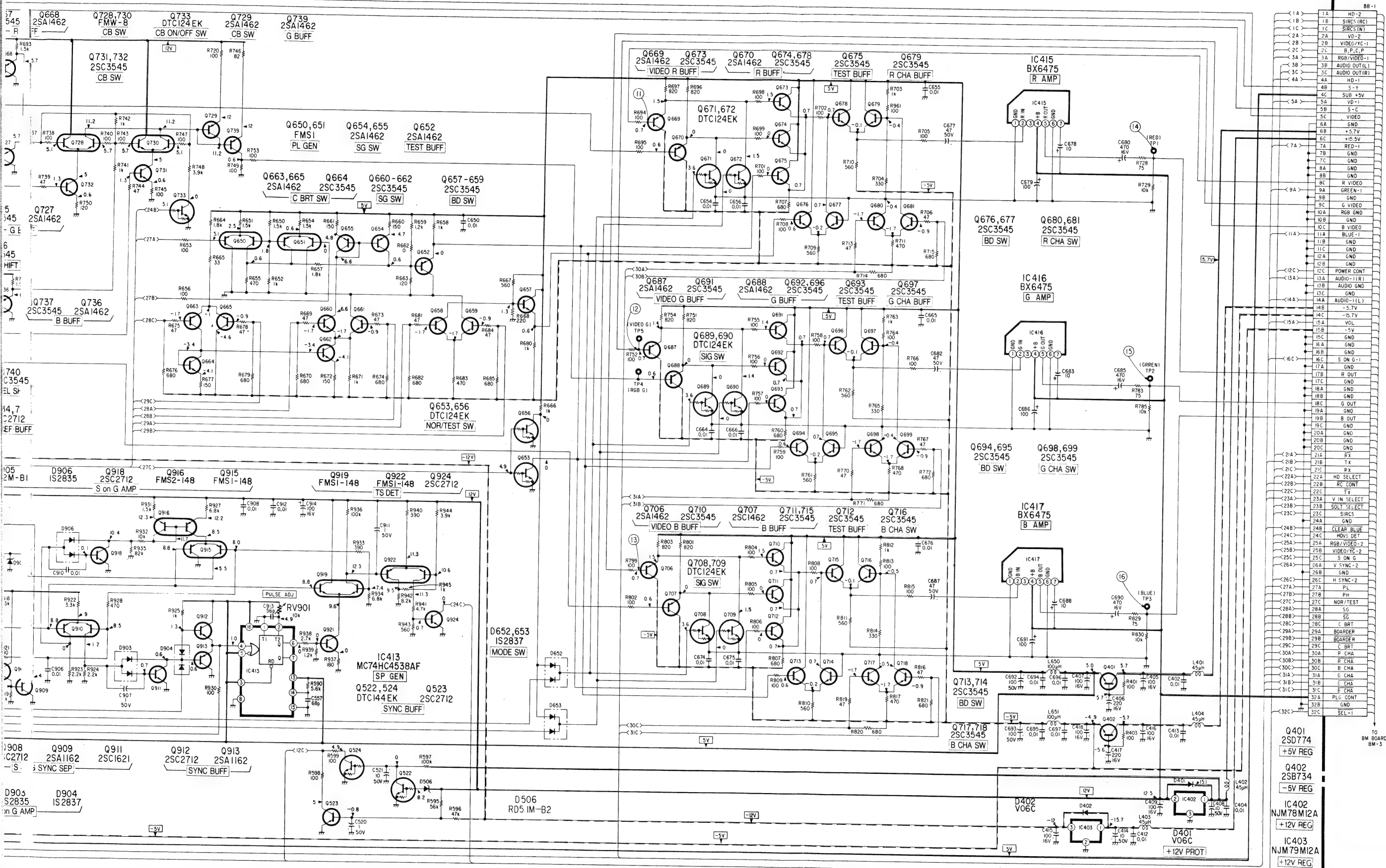
-  : Pattern from the side which enables seeing.
-  : Pattern of the rear side.

IC		Q221	A - 18
IC002	B - 17	Q222	D - 20
IC003	B - 22	Q223	A - 20
IC008	D - 20	Q224	B - 23
IC009	B - 23	Q225	B - 24
IC010	A - 20	Q226	B - 23
		Q230	D - 21
		Q231	D - 22
		Q232	D - 21
		Q233	D - 22
		Q347	E - 15
TRANSISTOR		Q348	E - 15
Q001	F - 16	Q349	E - 15
Q002	E - 17	Q350	A - 16
Q003	C - 16	Q351	D - 23
Q004	D - 16	Q352	E - 23
Q005	C - 17	Q355	B - 22
Q006	D - 15	Q356	B - 17
Q007	D - 17	Q357	B - 17
Q008	D - 16		
Q009	D - 16	DIODE	
Q010	A - 17	D004	C - 18
Q012	C - 18	D006	D - 18
Q013	B - 18	D101	D - 18
Q014	C - 18	D102	A - 17
Q015	B - 18	D103	B - 16
Q016	C - 18	D104	B - 23
Q017	C - 18	D201	D - 19
Q018	D - 18	D202	B - 19
Q019	D - 18	D204	A - 22
Q020	E - 15	D206	B - 17
Q021	F - 15	D207	B - 16
Q023	F - 15	D208	B - 16
Q024	D - 24	D209	D - 14
Q026	C - 23	D210	E - 24
Q027	B - 24		
Q028	E - 16	VARIABLE RESISTOR	
Q029	E - 15	RV101	C - 16
Q030	F - 14	RV102	B - 15
Q101	E - 18	RV202	A - 19
Q102	D - 17	RV203	A - 21
Q103	B - 17	RV204	E - 22
Q106	A - 15	RV205	E - 23
Q107	A - 15		
Q108	B - 18	TP	
Q201	B - 21	TP1	A - 16
Q203	C - 23	TP2	A - 18
Q204	C - 21	TP3	A - 17
Q205	C - 20	TP4	A - 16
Q206	C - 19	TP5	A - 17
Q207	A - 19	TP6	A - 16
Q208	B - 18	TP7	A - 18
Q209	A - 18	TP8	C - 22
Q210	A - 18	TP9	D - 22
Q212	D - 25	TP10	D - 22
Q213	D - 25		
Q214	D - 24		
Q215	D - 24		
Q216	E - 24		
Q217	E - 25		
Q218	E - 25		
Q219	F - 24		
Q220	B - 20		

BB BOARD WAVEFORMS







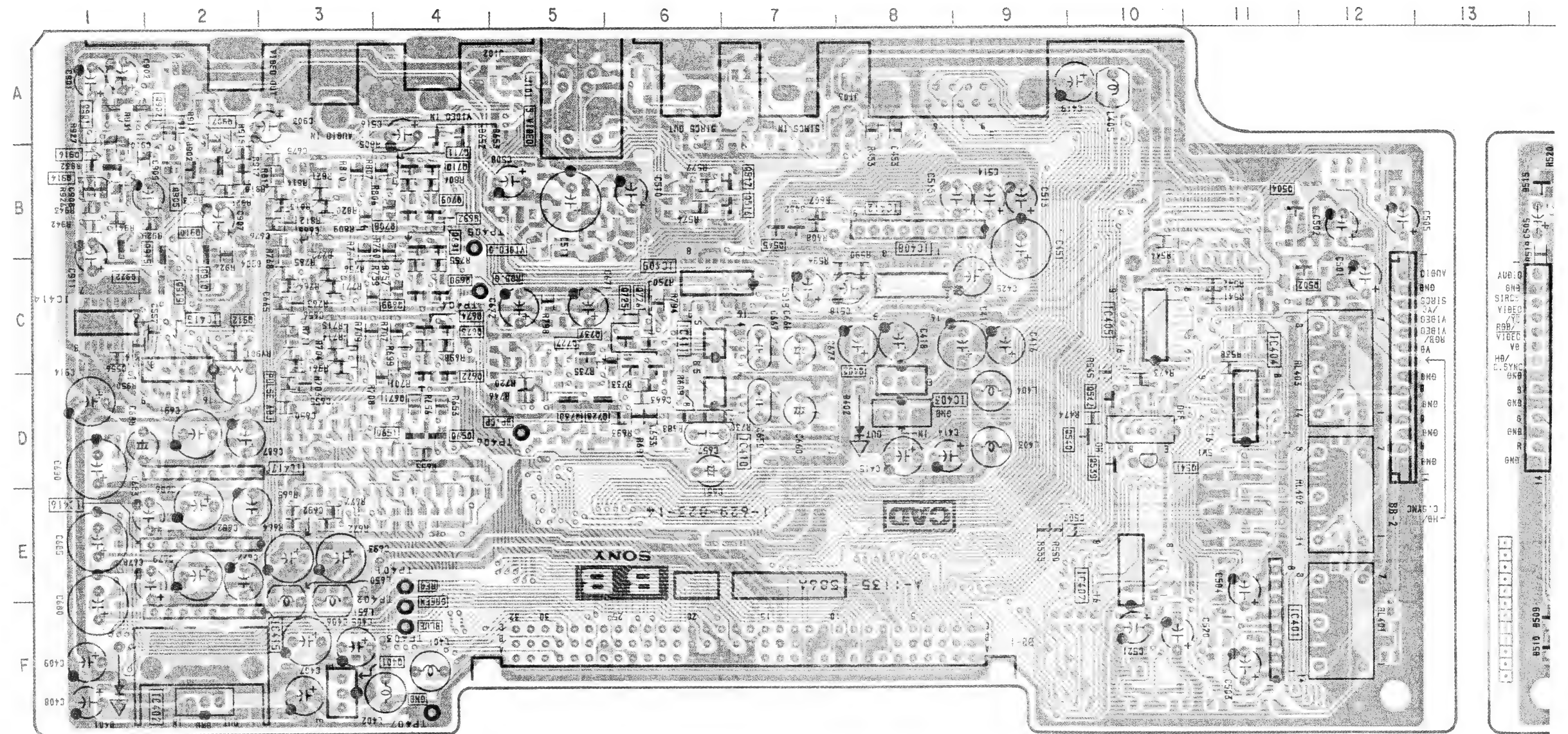
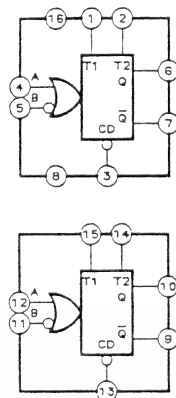
BB

[SIGNAL SELECT
R.G.B. PRE AMP]

- BB BOARD - (COMPONENT SIDE)

(CONDUCT

IC			
IC401	F-11	Q691	B-4
IC403	D-8	Q692	B-4
IC404	C-11	Q708	B-4
IC405	C-10	Q709	B-4
IC407	E-10	Q710	B-4
IC408	B-8	Q711	B-4
IC409	C-6	Q725	C-6
IC410	D-7	Q726	C-6
IC411	C-6	Q727	C-5
IC412	B-8	Q728	D-5
IC413	C-2	Q730	D-5
IC414	C-1	Q737	C-6
TRANSISTOR		Q901	A-1
		Q902	A-2
		Q905	B-2
		Q907	B-2
		Q910	B-2
		Q912	C-2
		Q914	B-1
		Q915	B-2
		Q916	B-2
		Q919	C-2
		Q922	B-1
		DIODE	
		D401	F-1
		D402	D-8
		D652	A-4
		D653	A-4
		D902	B-2
		D904	C-2
		VARIABLE RESISTOR	
		RV901	C-2

BB BOARD IC413 μ PC74HC4538N

BB BOARD

IC-No.	PIN-No.	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO
404	②	0.1	0.1	0.1	0.1	1.7
	③	0.1	0.8	0.8	0.8	2.8
	④	0	0	0	0	1.4
	⑤	1.4	1.6	1.4	1.4	0
	⑥	2.2	2.2	2.2	2.2	0.8
405	⑦	1.6	1.6	1.6	1.6	3
	⑧	4.6	4.6	4.6	4.6	0
	⑨	5	5	5	5	0
	⑩	0.1	0.1	0.1	0.1	0.6
	⑪	4.6	4.9	4.8	4.8	4.8
408	⑫	4.6	4.6	4.6	4.6	0
	⑬	4.6	4.6	4.6	4.6	0
409	⑭	4.6	4.6	4.6	4.6	0

Q-No.	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO
509	B	-	-	-	-
	C	-	-	-	-
	E	1.4	1.6	1.4	1.4
516	B	-	-	-	-
	C	-	-	-	-
	E	0.1	0.1	0.1	0.1
517	B	-	-	-	-
	C	-	-	-	-
	E	0	0	0	0
528	B	5	5	5	5
	C	0	0	0	0
	E	-	-	-	-
529	B	-	-	-	-
	C	1.4	1.6	1.4	1.4
	E	-	-	-	-

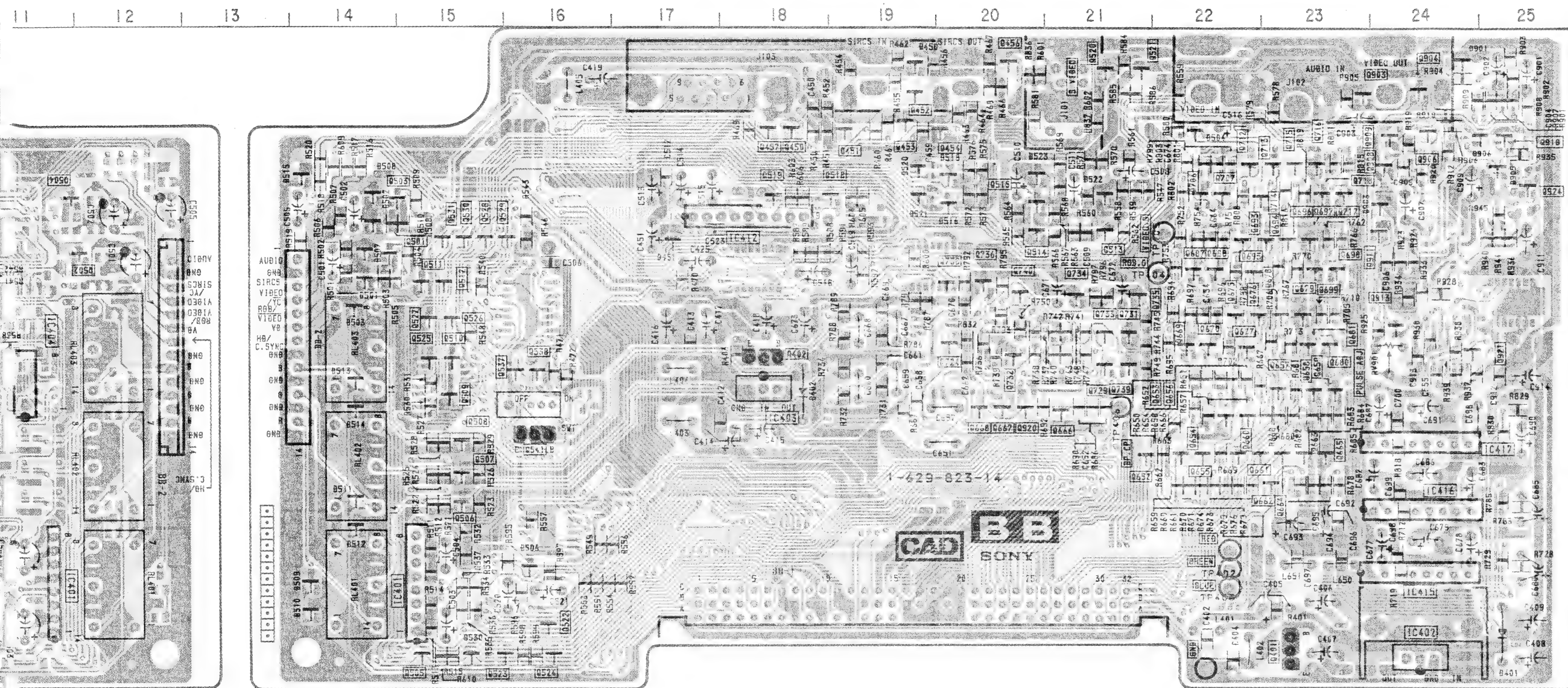
Q-No.	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO
530	B	-	-	-	-
	C	0.1	0.1	0.1	0.1
	E	-	-	-	-
531	B	-	-	-	-
	C	0	0	0	0
	E	-	-	-	-
650	1	-	-	-	-
	2	-	-	-	-
	3	5.1	5.1	5.1	5.1
	4	-	-	-	-
	5	1.8	1.8	1.8	1.8
651	1	-	-	-	-
	2	-	-	-	-
	3	0.8	1.8	1.8	1.8
	4	-	-	-	-
	5	0	0	0	0

Q-No.	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO
654	B	4.4	6.3	6.2	4.3
	C	-	-	-	-
	E	-	-	-	-
655	B	4.4	6.3	6.2	4.3
	C	4.4	6.3	6.2	4.3
	E	-	-	-	-
660	B	-	-	-	-
	C	4.5	6.3	6.2	4.3
	E	-	-	-	-
739	B	-	-	-	-
	C	0.6	0.6	0.6	0.6
	E	12	12	12	12
740	B	-	-	-	-
	C	-	-	-	-
	E	6.4	0.6	6.4	0.6

BB

[SIGNAL SELECT]
[R.G.B. PRE AMP]

(CONDUCTOR SIDE)

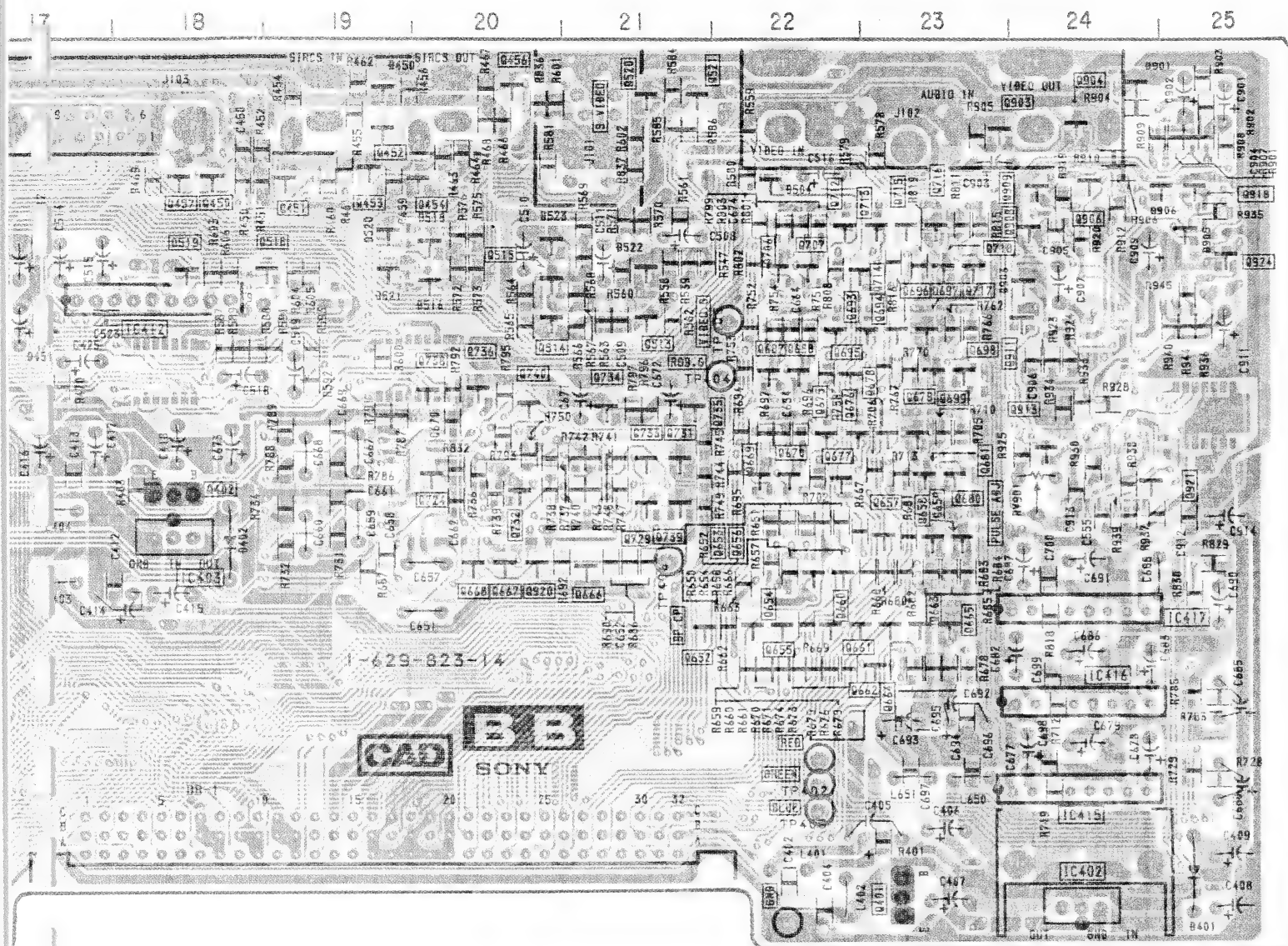


Note:

- Pattern from the side which enables seeing.
- Pattern of the rear side.

IC		
IC402	F - 24	Q661
IC403	D - 18	Q662
IC412	B - 18	Q663
IC415	F - 24	Q664
IC416	E - 24	Q665
IC417	D - 25	Q666
		Q667
		Q668
		Q669
		Q670
		Q675
		Q676
		Q677
		Q678
		Q679
		Q680
		Q681
		Q687
		Q688
		Q693
		Q694
		Q695
		Q696
		Q697
		Q698
		Q699
		Q706
		Q707
		Q712
		Q713
		Q714
		Q715
		Q716
		Q717
		Q718
		Q724
		Q729
		Q731
		Q732
		Q733
		Q734
		Q735
		Q736
		Q738
		Q739
		Q740
		Q903
		Q904
		Q906
		Q908
		Q909
		Q911
		Q913
		Q918
		Q920
		Q921
		Q924
</		

B B [SIGNAL SELECT]
[R.G.B. PRE AMP]



Note:

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

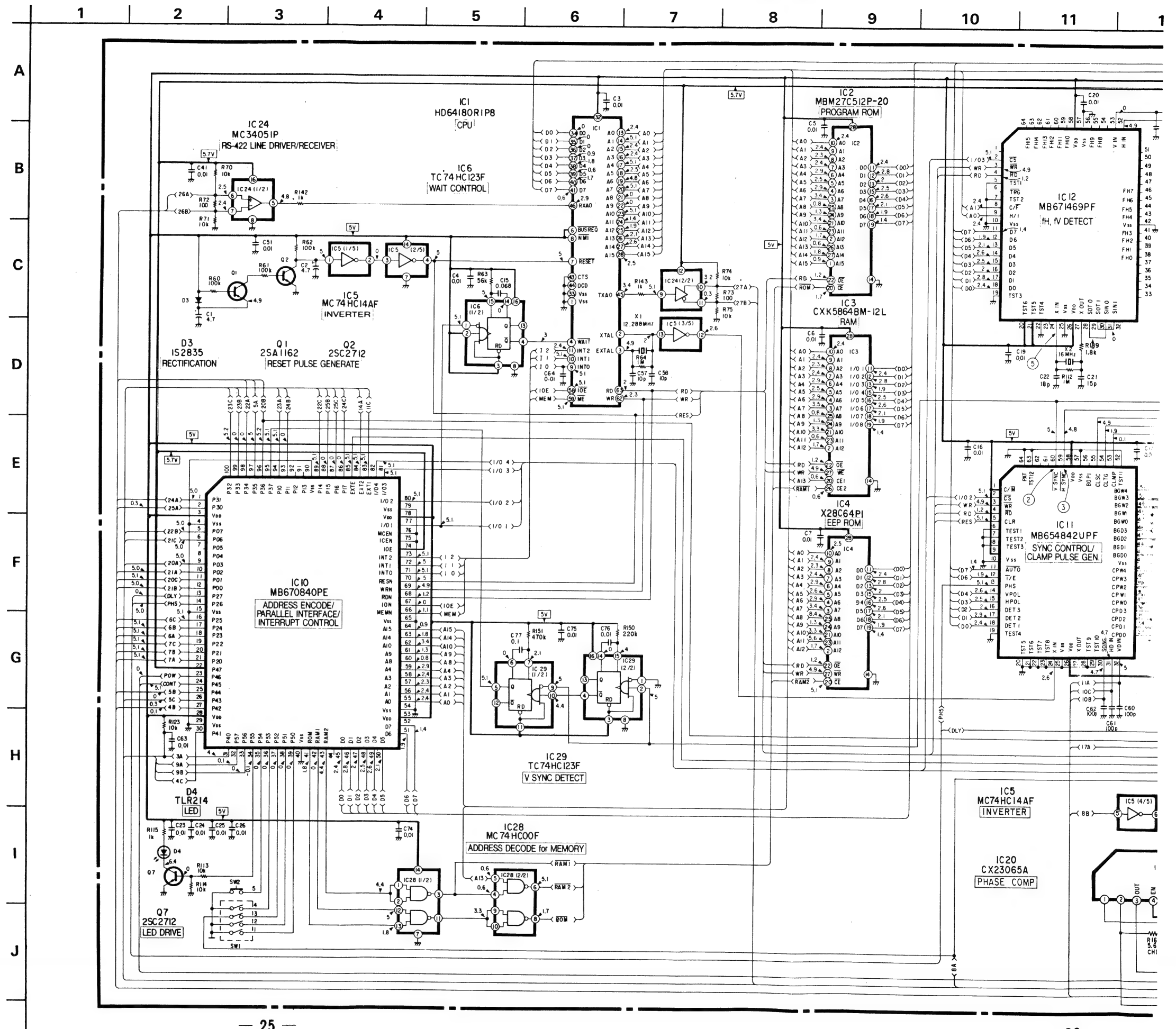
IC		DIODE	
IC402	F - 24	D401	F - 25
IC403	D - 18	D402	D - 18
IC412	B - 18	D450	A - 19
IC415	F - 24	D451	C - 17
IC416	E - 24	D452	B - 19
IC417	D - 25	D501	C - 14
		D502	B - 14
		D503	C - 14
		D504	B - 22
		D506	E - 16
		D507	C - 14
		D508	B - 14
		D509	F - 14
		D510	F - 14
		D511	E - 14
		D512	E - 14
		D513	D - 14
		D514	D - 14
		D515	B - 14
		D516	B - 20
		D518	B - 20
		D520	B - 19
		D521	B - 19
		D522	B - 21
		D523	B - 20
		D530	F - 15
		D901	A - 24
		D903	B - 24
		D905	B - 25
		D906	B - 25

TRANSISTOR

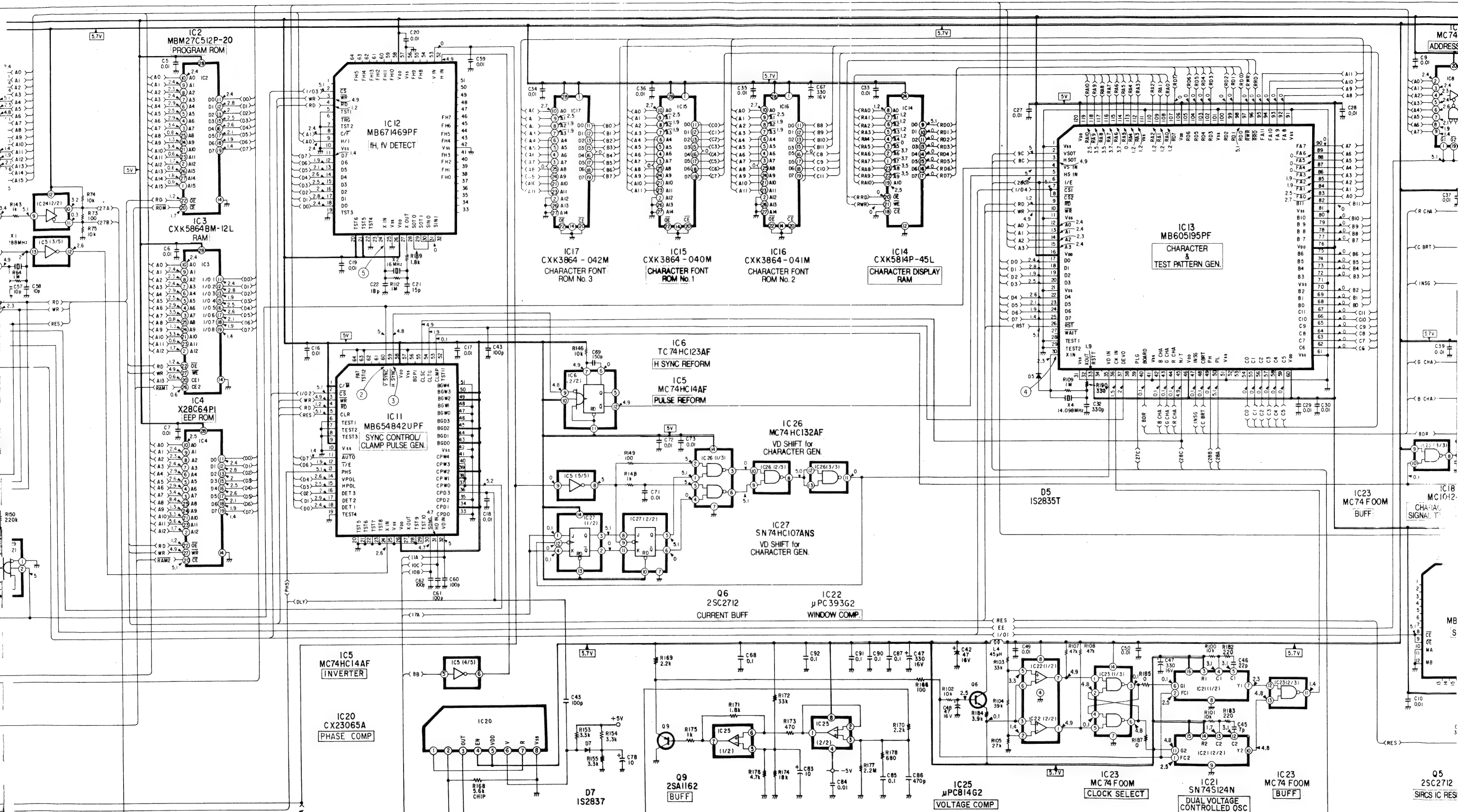
Q401	F - 23	Q661	E - 22
Q402	D - 18	Q662	E - 22
Q450	B - 18	Q663	D - 23
Q451	B - 19	Q664	E - 23
Q452	A - 19	Q665	D - 23
Q453	B - 19	Q666	D - 21
Q454	B - 20	Q667	D - 20
Q456	A - 20	Q668	D - 20
Q457	B - 18	Q669	C - 22
Q501	B - 15	Q670	C - 22
Q502	C - 11	Q675	C - 22
Q503	B - 14	Q676	C - 22
Q505	F - 15	Q677	C - 22
Q506	E - 15	Q678	C - 23
Q507	E - 15	Q679	C - 23
Q508	D - 15	Q680	D - 23
Q509	D - 15	Q681	C - 23
Q510	C - 15	Q687	C - 22
Q511	C - 15	Q688	C - 22
Q512	C - 15	Q693	B - 22
Q514	C - 20	Q694	B - 23
Q515	B - 20	Q695	C - 22
Q518	B - 19	Q696	B - 23
Q519	B - 18	Q697	B - 23
Q520	A - 21	Q698	C - 23
Q521	A - 21	Q699	C - 23
Q522	F - 16	Q706	B - 22
Q523	F - 15	Q707	B - 22
Q524	F - 16	Q712	B - 22
Q525	C - 15	Q713	B - 23
Q526	C - 15	Q714	B - 23
Q527	C - 15	Q715	B - 23
Q528	B - 15	Q716	A - 23
Q529	B - 15	Q717	B - 23
Q530	B - 15	Q718	B - 23
Q531	B - 15	Q724	D - 20
Q537	D - 15	Q729	D - 21
Q538	D - 16	Q731	C - 21
Q541	D - 16	Q732	D - 20
Q652	E - 21	Q733	C - 21
Q653	D - 21	Q734	C - 21
Q654	D - 22	Q735	C - 21
Q655	E - 22	Q736	C - 20
Q656	D - 22	Q738	C - 20
Q657	D - 23	Q739	D - 21
Q658	D - 23	Q740	C - 20
Q659	D - 23	Q903	A - 24
Q660	D - 22	Q904	A - 24
		Q906	B - 24
		Q908	B - 24
		Q909	B - 24
		Q911	C - 23
		Q913	C - 24
		Q918	B - 25
		Q920	D - 20
		Q921	D - 25
		Q924	B - 25

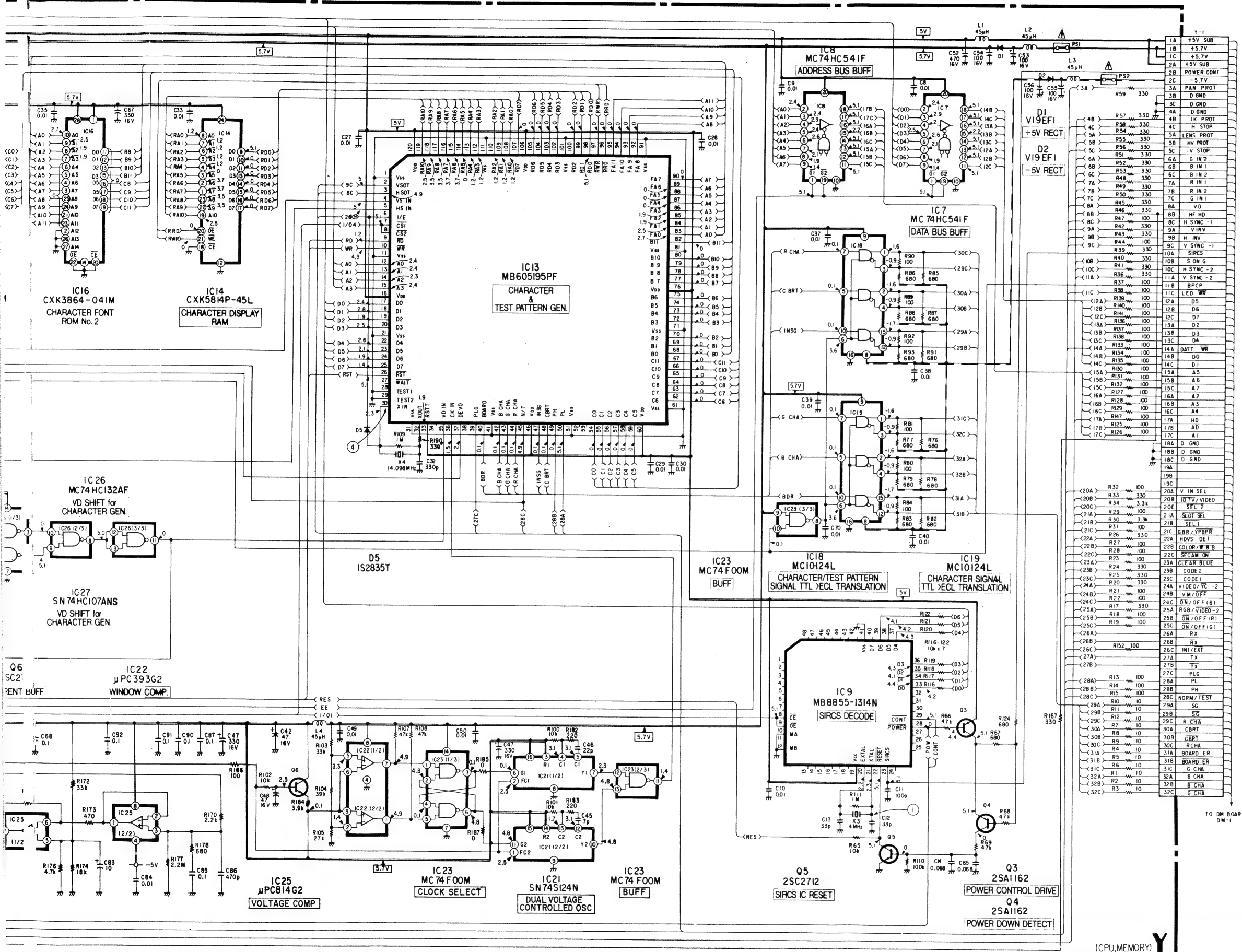
TP

TP401	E - 22
TP402	F - 22
TP403	F - 22
TP404	C - 22
TP405	B - 22
TP406	D - 21
TP407	F - 22

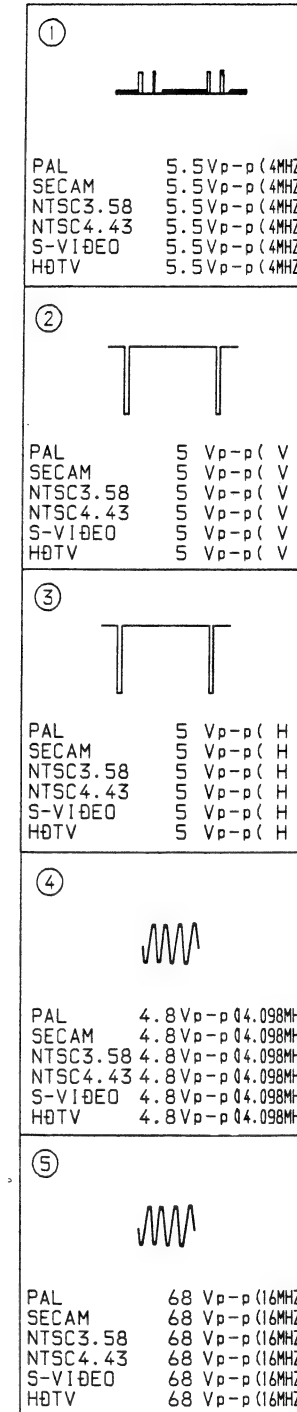


7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23





Y BOARD WAVEFORMS

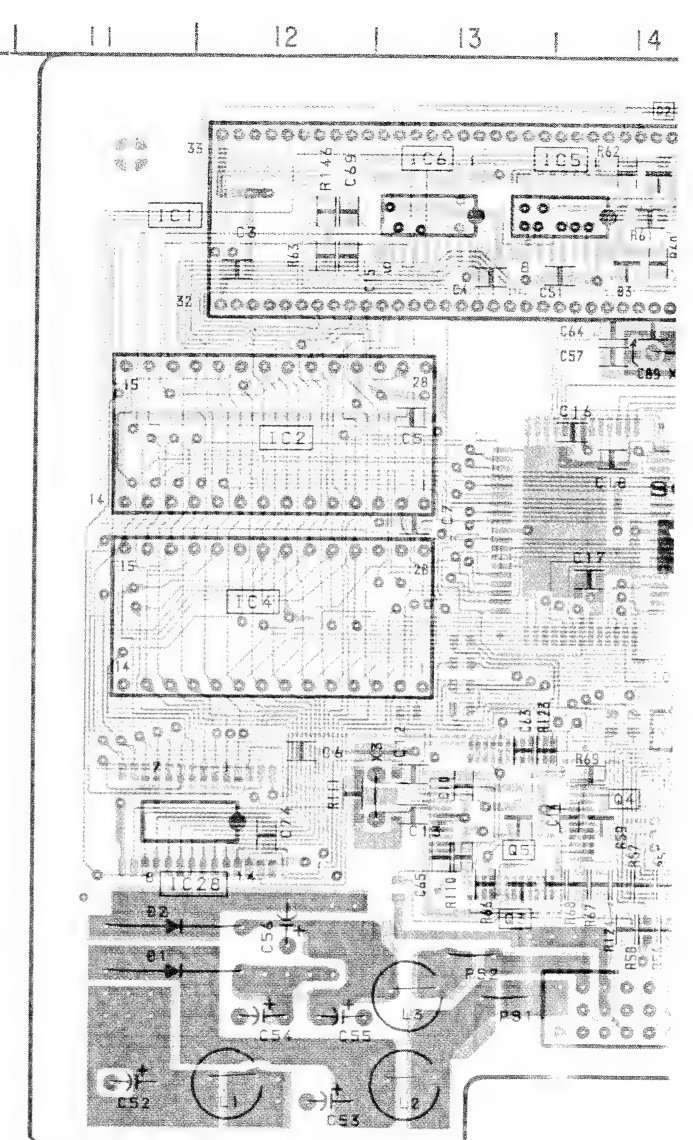
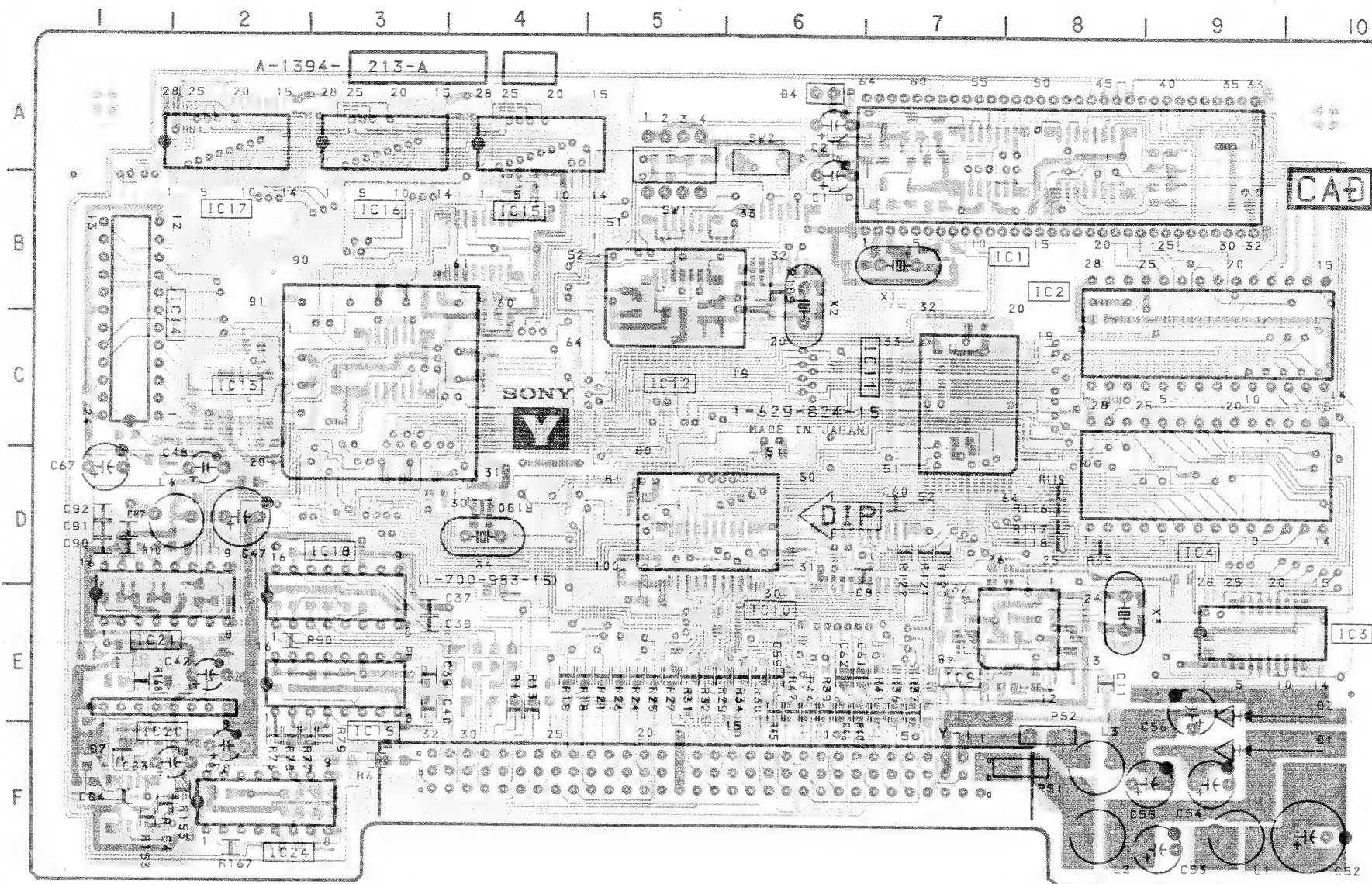


- Y BOARD - (COMPONENT SIDE)

(CONDUCTOR SIDE)

IC	
IC1	A-8
IC2	C-9
IC3	E-9
IC4	D-9
IC9	E-7
IC10	D-5
IC11	C-7
IC12	C-5
IC13	C-2
IC14	C-1
IC15	A-4
IC16	A-3
IC17	A-2
IC18	E-3
IC19	E-3
IC20	E-1
IC21	E-1
IC24	F-2

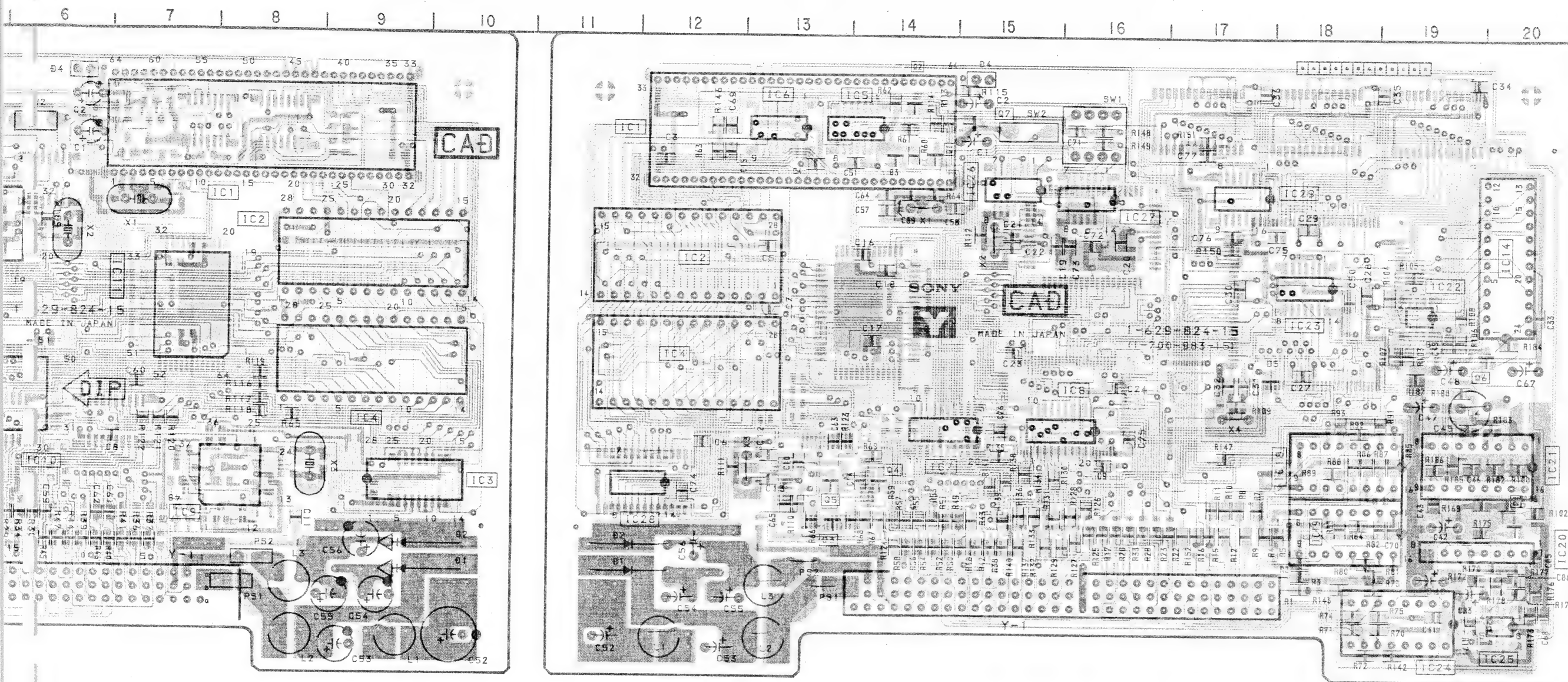
DIODE	
D1	F-10
D2	E-10
D4	A-6
D7	F-1



EMORY]

Y [CPU MEMORY]

(CONDUCTOR SIDE)




IC	
IC2	C - 12
IC4	D - 12
IC5	A - 13
IC6	A - 13
IC7	D - 14
IC8	D - 16
IC14	C - 20
IC18	E - 18
IC19	E - 18
IC20	E - 20
IC21	E - 20
IC22	C - 19
IC23	C - 18
IC24	F - 19
IC25	F - 20
IC26	B - 15
IC27	B - 16
IC28	E - 12
IC29	B - 17

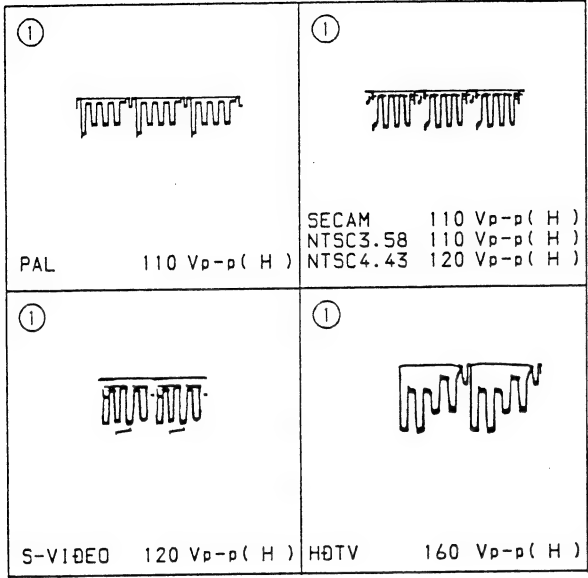
TRANSISTOR	
Q1	B - 14
Q2	A - 14
Q3	E - 13
Q4	E - 14
Q5	E - 13
Q6	D - 19
Q7	A - 15
Q9	E - 20

DIODE	
D1	F - 11
D2	E - 11
D3	B - 14
D4	A - 15
D5	D - 17

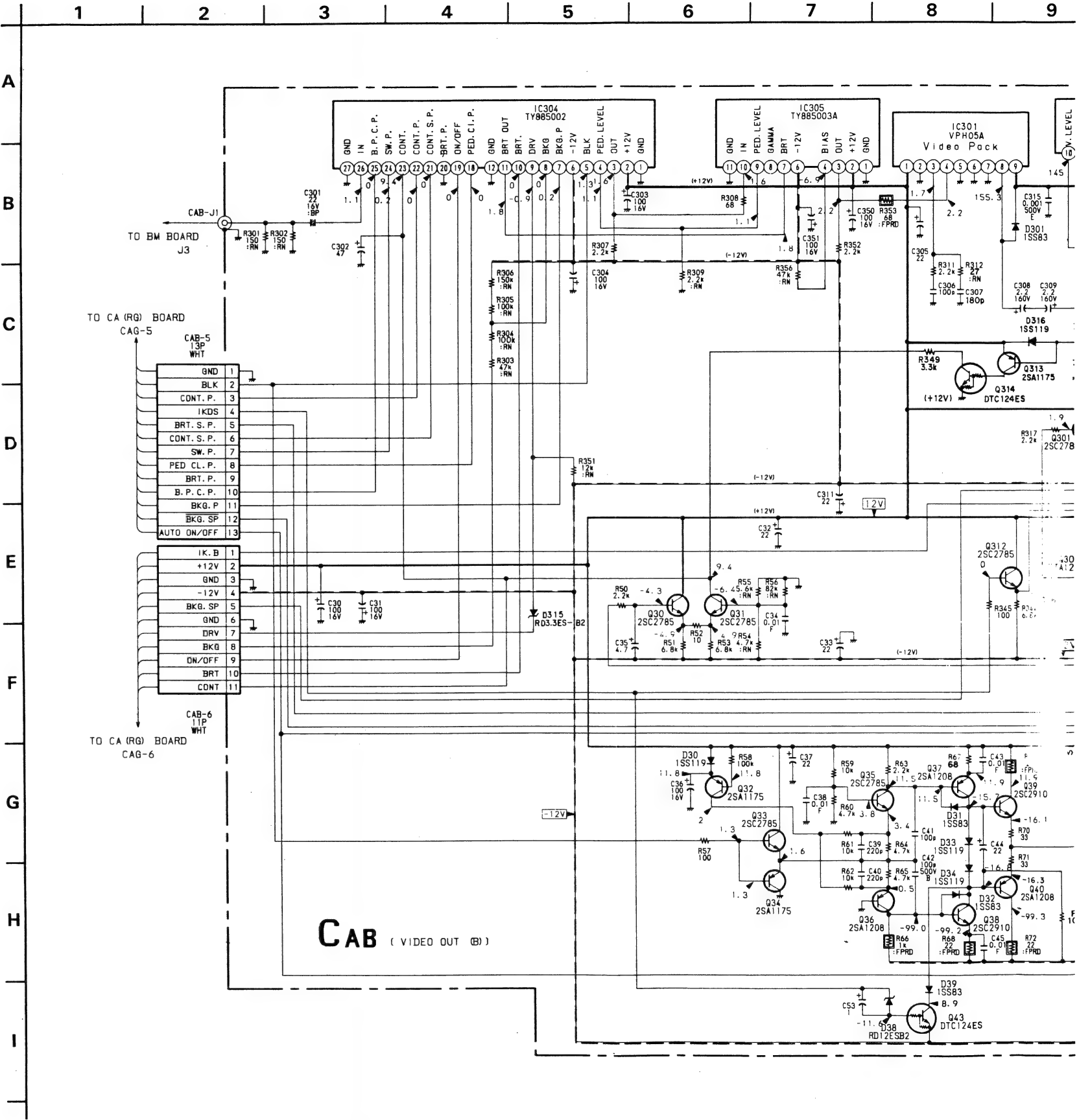
Note :

-  : Pattern from the side which enables seeing.
- : Pattern of the rear side.

CA(B) BOARD WAVEFORMS



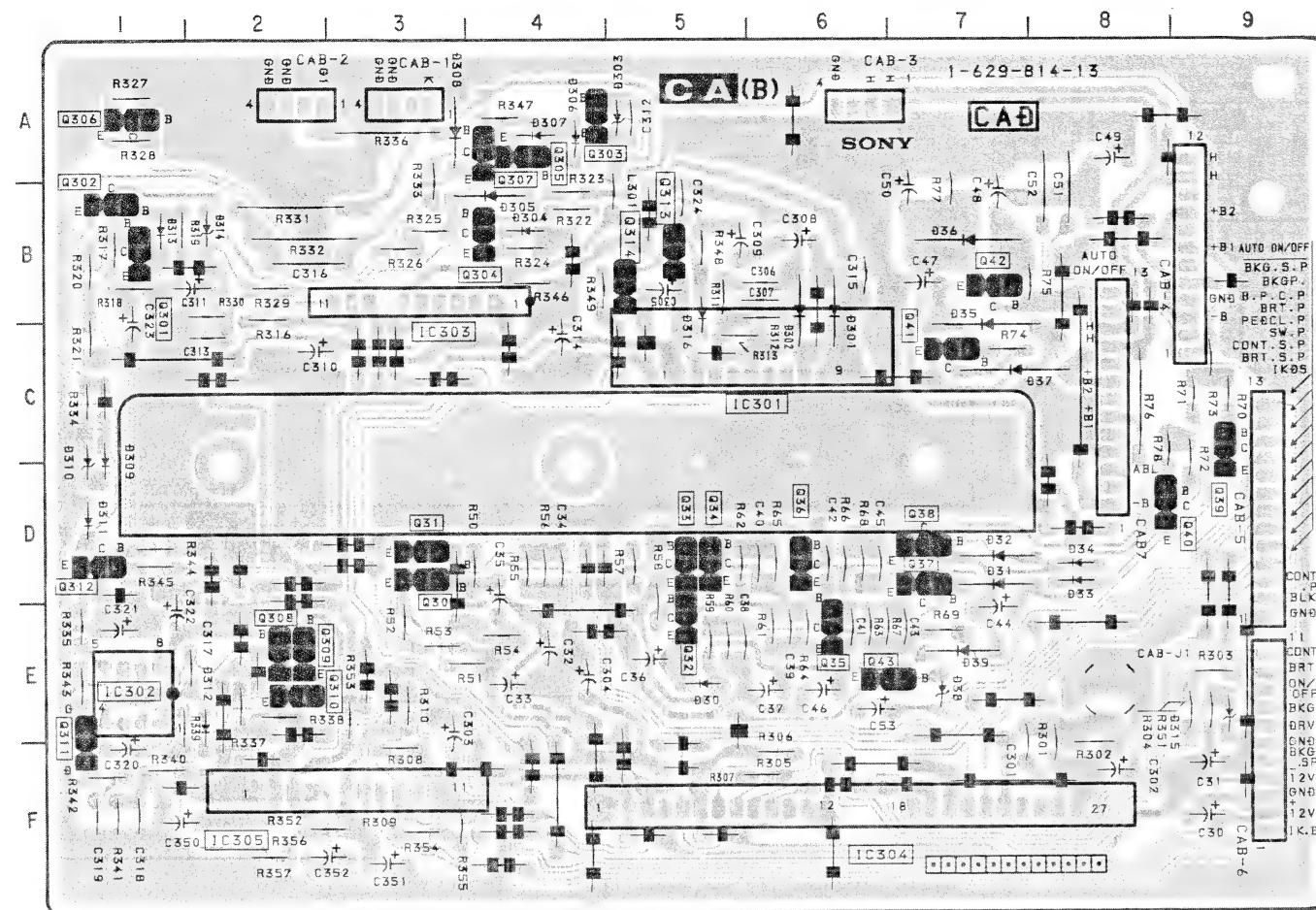
IC301	VPH05	B VIDEO OUT
IC302	TL082CP	B AUTO BKG
IC303	SNY8C02	B CLAMP
IC304	TY885002	B SIGNAL PROCESS
IC305	TY885003	B Y CORR
Q30	2SC2785	Σ ABL
Q31	2SC2785	Σ ABL
Q32	2SA1175	OFF SPOT PROT
Q33	2SC2785	BLK
Q34	2SA1175	BLK
Q35	2SC2785	BLK
Q36	2SA1208	BLK
Q37	2SA1208	BLK
Q38	2SC2910	BLK
Q39	2SC2910	BLK
Q40	2SA1208	BLK
Q41	2SD982	+ 210V RIPPLE FILTER
Q42	2SA1381	- 100V RIPPLE FILTER
Q43	DTC124ES	BRT PULSE GEN
Q301	2SC2785	B CLAMP
Q302	2S3209	B CLAMP
Q303	2SA1381	B IK DET-1
Q304	2SA1381	B CURRENT SOURCE
Q305	2SC2785	B IK DET-2
Q306	2SC3209	B IK DET-2
Q307	2SA1381	B IK DET-2
Q308	DTA124ES	B AUTO BKG SW
Q309	DTA124ES	B AUTO BKG SW
Q310	DTC124ES	B AUTO BKG SW
Q311	2SK523	B AUTO BKG
Q312	2SC2785	B IK DET-2
D30	1SS119	OFF SPOT PROT
D31	1SS83	BLK
D32	1SS83	BLK
D33	1SS119	BLK
D34	1SS119	BLK
D35	V06C	+ 12V RIPPLE FILTER PROT
D36	V06C	- 100V RIPPLE FILTER PROT
D37	V19E	+ 210V RIPPLE FILTER PROT
D38	RD12ESB2	BRT PULSE GEN
D39	1SS83	BRT PULSE GEN
D301	1SS83	B VIDEO OUT PROT
D303	RD2.0ESB2	B IK DET-1 PORT
D304	1SS119	B THERM COMP
D305	1SS83	B IK DET-2 PORT
D306	1SS119	B IK DET-2 PORT
D307	1SS119	B IK DET-2 PORT
D309	1SS119	B IK DET-2 PORT
D310	RD2.0ESB2	B IK DET-2 PORT
D311	1SS119	B IK DET-2 PORT
D312	1SS119	B AUTO BKG SW
D313	1SS119	B OFF SPOT PROT
D314	RD13ESB2	B IK DET-2 PORT
D315	RD3.3ESB2	B DRV



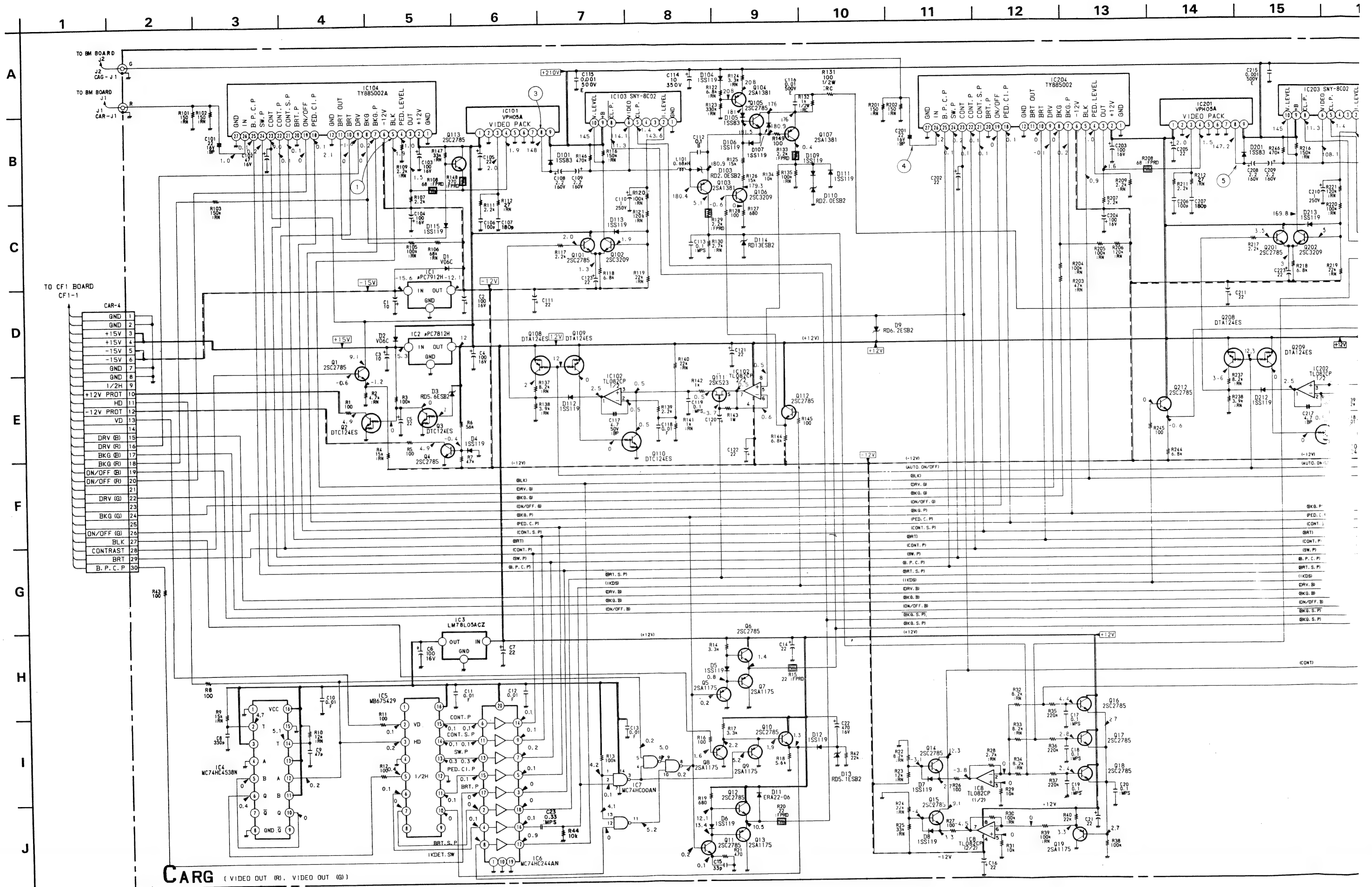


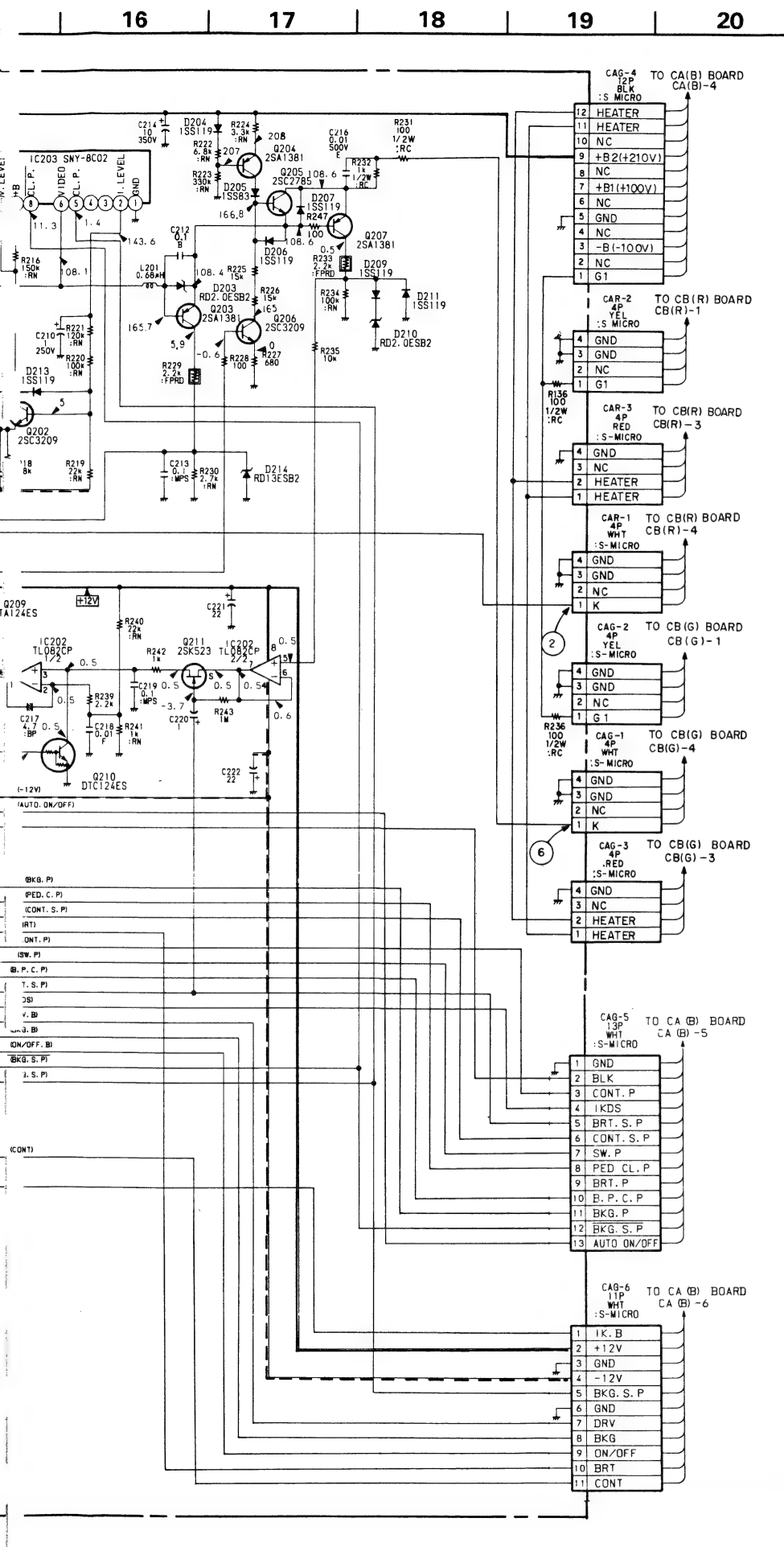
CA(B) [VIDEO OUT(B)]

- CA(B) BOARD -



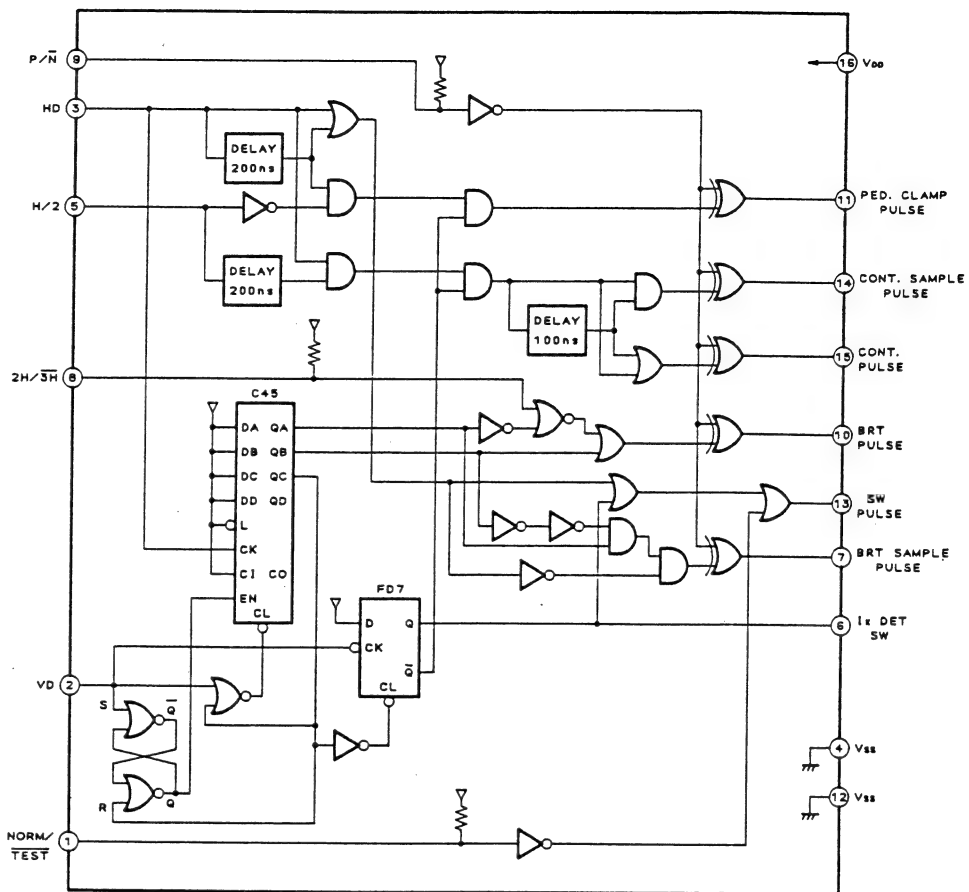
IC		DIODE	
IC301	C-5	D30	E-5
IC302	E-1	D31	D-7
IC303	C-3	D32	D-7
IC304	F-6	D33	D-8
IC305	F-2	D34	D-8
		D35	B-7
		D36	B-7
		D37	C-7
		D38	E-7
		D39	E-7
		D301	C-6
		D303	A-5
		D304	B-4
		D305	B-4
		D306	A-4
		D307	A-4
		D309	C-1
		D310	C-1
		D311	D-1
		D312	E-2
		D313	A-1
		D314	B-2
		D315	E-8
		D316	C-5
TRANSISTOR			
Q30	D-3		
Q31	D-3		
Q32	E-5		
Q33	D-5		
Q34	D-5		
Q35	E-6		
Q36	D-6		
Q37	D-7		
Q38	D-7		
Q39	D-9		
Q40	D-8		
Q41	C-7		
Q42	B-7		
Q43	E-6		
Q301	B-1		
Q302	B-1		
Q303	A-4		
Q304	B-4		
Q305	A-4		
Q306	A-1		
Q307	A-4		
Q308	E-2		
Q309	E-2		
Q310	E-2		
Q311	E-1		
Q312	D-1		
Q313	B-5		
Q314	B-5		



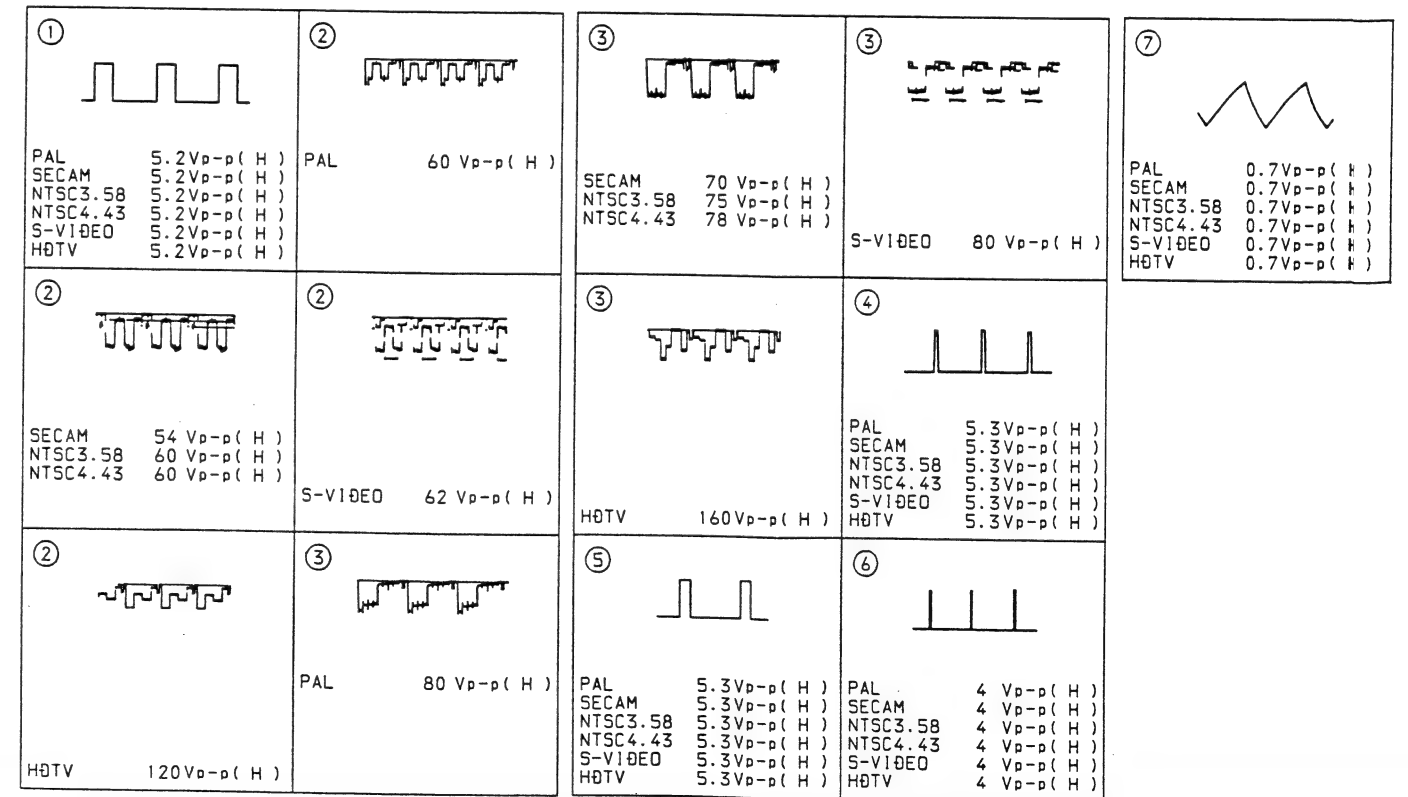


IC1	PC7912H	-12V REG
IC2	PC7812H	+12V REG
IC3	PC78L05ACZ	+5V REG
IC4	MC74HC4538N	PULSE GEN
IC5	MB675429	PULSE GEN
IC6	MC74HC24AN	PULSE GEN
IC7	MC74HC00AN	PULSE GEN
IC8	TL082CP	PEAK & S. T. ABL
IC101	VPH05	R VIDEO OUT
IC102	TL082CP	R AUDIO BKG
IC103	SNY8C02	R CLAMP
IC104	TY885002	R SIGNAL PROCESS
IC201	VPH05	G VIDEO OUT
IC202	TL082CP	G AUTO BKG
IC203	SNY8C02	G CLAMP
IC204	TY885002	G SIGNAL PROCESS
Q1	2SC2785	CONTRAST CONTROL
Q2	DTC124ES	+12V PROT
Q3	DTC124ES	+12V PROT
Q4	2SC2785	-12V PROT
Q5	2SA1175	BKG S. P. GEN
Q6	2SC2785	BKG S. P. GEN
Q7	2SA1175	BKG S. P. GEN
Q8	2SA1175	BKG P. GEN
Q9	2SA1175	BKG P. GEN
Q10	2SC2785	BKG P. GEN
Q11	2SC2785	BKG S. P. GEN
Q12	2SC2785	BKG S. P. GEN
Q13	2SA1175	BKG S. P. GEN
Q14	2SC2785	PEAK ABL
Q15	2SC2785	S. T. ABL
Q16	2SC2785	B. S. T. ABL
Q17	2SC2785	G. S. T. ABL
Q18	2SC2785	R. S. T. ABL
Q19	2SA1175	S. T. ABL
Q101	2SC2785	R CLAMP
Q102	2SC3209	R CLAMP
Q103	2SA1381	R IK DET-1
Q104	2SA1381	R CURRENT SOURCE
Q105	2SC2785	R IK DET-2
Q106	2SC3209	R IK DET-2
Q107	2SA1381	R IK DET-2
Q108	DTA124ES	R AUTO BKG SW
Q109	DTA124ES	R AUTO BKG SW
Q110	DTC124ES	R AUTO BKG SW
Q111	2SK523	R AUTO BKG
Q112	2SC2785	R IK DET-2
Q113	2SC2785	R Y CORR
Q201	2SC2785	G CLAMP
Q202	2SC3209	G CLAMP
Q203	2SA1381	G IK DET-1
Q204	2SA1381	G CURRENT SOURCE
Q205	2SC2785	G IK DET-2
Q206	2SC3209	G IK DET-2
Q207	2SA1381	G IK DET-2
Q208	DTA124ES	G AUTO BKG SW
Q209	DTA124ES	G AUTO BKG SW
Q210	DTC124ES	G AUTO BKG SW
Q211	2SK523	G AUTO BKG
Q212	2SC2785	G IK DET-2
D1	V06C	-12V REG PROT
D2	V06C	+12V REG PROT
D3	RD5.6ESB2	+12V PROT
D4	1SS119	-12V PROT
D5	1SS119	BIAS
D6	1SS119	BIAS
D7	1SS119	PEAK ABL
D8	1SS119	S. T. ABL
D9	RD6.2ESB2	CONT PROT
D11	ERA22-06	PROT
D12	1SS119	ON SPOT PROT
D13	RD5.1ESB2	ON SPOT PROT
D101	1SS83	R VIDEO OUT PROT
D103	RD2.0ESB2	R IK DET-1 PROT
D104	1SS119	R THERM COMP
D105	1SS83	R IK DET-2 PROT
D106	1SS119	R IK DET-2 PROT
D107	1SS119	R IK DET-2 PROT
D109	1SS119	R IK DET-2 PROT
D110	RD2.0ESB2	R IK DET-2 PROT
D111	1SS119	R AUTO BKG SW
D112	1SS119	R AUTO BKG SW
D113	1SS119	R OFF SPOT PROT
D114	RD1.3ESB2	R IK DET-1 PROT
D115	1SS119	R Y CORR
D201	1SS83	G VIDEO OUT PROT
D203	RD2.0ESB2	G IK DET-1 PROT
D204	1SS119	G THERM COMP
D205	1SS83	G IK DET-2T PROT
D206	1SS119	G IK DET-2T PROT
D207	1SS119	G IK DET-2T PROT
D209	1SS119	G IK DET-2T PROT
D210	RD2.0ESB2	G IK DET-2T PROT
D211	1SS119	G IK DET-2T PROT
D212	1SS119	G AUTO BKG SW
D213	1SS119	G OFF SPOT PROT
D214	RD1.3ESB2	G IK DET-1 PROT

CA(RG) BOARD IC5 MB675429



CA(RG) BOARD WAVEFORMS



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MARK

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q103	8-729-901-01	TRANSISTOR DTC144EK	
Q106	8-729-901-01	TRANSISTOR DTC144EK	
Q107	8-729-901-01	TRANSISTOR DTC144EK	
Q108	8-729-901-01	TRANSISTOR DTC144EK	
Q201	8-729-140-96	TRANSISTOR 2SD774-34	
Q202	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q203	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q204	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q205	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q206	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q207	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q208	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q209	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q210	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q212	8-729-116-06	TRANSISTOR 2SK160-K6	
Q213	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q214	8-729-116-06	TRANSISTOR 2SK160-K6	
Q215	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q216	8-729-116-06	TRANSISTOR 2SK160-K6	
Q217	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q218	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q219	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q220	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q221	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q222	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q223	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q224	8-729-901-01	TRANSISTOR DTC144EK	
Q225	8-729-901-01	TRANSISTOR DTC144EK	
Q226	8-729-901-01	TRANSISTOR DTC144EK	
Q230	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q231	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q232	8-729-116-06	TRANSISTOR 2SK160-K6	
Q233	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q347	8-729-901-01	TRANSISTOR DTC144EK	
Q348	8-729-901-01	TRANSISTOR DTC144EK	
Q349	8-729-901-01	TRANSISTOR DTC144EK	
Q350	8-729-901-01	TRANSISTOR DTC144EK	
Q351	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q352	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q355	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q356	8-729-901-01	TRANSISTOR DTC144EK	
Q357	8-729-901-01	TRANSISTOR DTC144EK	
<RESISTOR>			
R1	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R8	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R11	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R002	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R003	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R004	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R006	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
R007	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
R009	1-216-643-11	METAL CHIP 470 0.50% 1/10W	
R010	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R012	1-216-691-11	METAL CHIP 47K 0.50% 1/10W	
R013	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
R014	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R015	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R016	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R017	1-216-691-11	METAL CHIP 47K 0.50% 1/10W	
R018	1-216-647-11	METAL CHIP 680 0.50% 1/10W	
R019	1-216-647-11	METAL CHIP 680 0.50% 1/10W	
R020	1-216-047-00	METAL GLAZE 820 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R021	1-216-643-11	METAL CHIP 470 0.50% 1/10W	
R022	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R023	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R024	1-216-637-11	METAL CHIP 270 0.50% 1/10W	
R025	1-216-637-11	METAL CHIP 270 0.50% 1/10W	
R026	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R027	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R028	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R029	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R030	1-216-009-00	METAL GLAZE 22 5% 1/10W	
R031	1-216-643-11	METAL CHIP 470 0.50% 1/10W	
R032	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R033	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R034	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R035	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R036	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R037	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R038	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R039	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R040	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R041	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R048	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R049	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R050	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R051	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R052	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R053	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R054	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R055	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R060	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R061	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R062	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R063	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R064	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R065	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R066	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R067	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R068	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
R069	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R070	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R071	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R101	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R102	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R103	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R104	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R105	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R106	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R107	1-216-647-11	METAL CHIP 680 0.50% 1/10W	
R108	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R109	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R111	1-216-066-00	METAL GLAZE 5.1K 5% 1/10W	
R112	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R113	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R114	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R115	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R116	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R117	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R118	1-216-665-11	METAL CHIP 3.9K 0.50% 1/10W	
R119	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R120	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R122	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R123	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R124	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R126	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R127	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R128	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R131	1-216-681-11	METAL CHIP 18K 0.50% 1/10W	
R132	1-216-681-11	METAL CHIP 18K 0.50% 1/10W	
R140	1-216-689-11	METAL CHIP 39K 0.50% 1/10W	
R141	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
R142	1-216-681-11	METAL CHIP 18K 0.50% 1/10W	
R143	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
R144	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
R145	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
R146	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
R149	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
R150	1-216-681-11	METAL CHIP 18K 0.50% 1/10W	
R151	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R152	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R153	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R154	1-216-643-11	METAL CHIP 470 0.50% 1/10W	
R155	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R156	1-216-691-11	METAL CHIP 47K 0.50% 1/10W	
R157	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R158	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R160	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R161	1-216-691-11	METAL CHIP 47K 0.50% 1/10W	
R162	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R163	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R164	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R165	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
R166	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
R167	1-216-103-00	METAL GLAZE 180K 5% 1/10W	
R168	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R169	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R170	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R201	1-216-643-11	METAL CHIP 470 0.50% 1/10W	
R202	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R204	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R205	1-216-119-00	METAL GLAZE 820K 5% 1/10W	
R206	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R207	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R208	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R209	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R210	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R212	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R213	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R216	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R217	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R220	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R221	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R224	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R225	1-216-099-00	METAL GLAZE 120K 5% 1/10W	
R226	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R227	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R228	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R229	1-216-681-11	METAL CHIP 18K 0.50% 1/10W	
R230	1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
R231	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R232	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	
R233	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
R234	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R235	1-216-099-00	METAL GLAZE 120K 5% 1/10W	
R236	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R237	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R238	1-216-647-11	METAL CHIP 680 0.50% 1/10W	
R239	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W	

REMARK	REF. NO.	PART NO.	DESCRIPTION			
	R240	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
	R241	1-216-643-11	METAL CHIP	470	0.50%	1/10W
	R242	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
	R243	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
	R244	1-216-077-00	METAL GLAZE	15K	5%	1/10W
	R245	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
	R246	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
	R247	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
	R248	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
	R249	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
	R250	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
	R251	1-216-095-00	METAL GLAZE	82K	5%	1/10W
	R252	1-216-083-00	METAL GLAZE	27K	5%	1/10W
	R253	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
	R254	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
	R255	1-216-017-00	METAL GLAZE	47	5%	1/10W
	R256	1-216-017-00	METAL GLAZE	47	5%	1/10W
	R257	1-216-025-00	METAL GLAZE	100	5%	1/10W
	R258	1-216-121-00	METAL GLAZE	1M	5%	1/10W
	R259	1-216-025-00	METAL GLAZE	100	5%	1/10W
	R260	1-216-121-00	METAL GLAZE	1M	5%	1/10W
	R261	1-216-121-00	METAL GLAZE	1M	5%	1/10W
	R262	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
	R263	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
	R264	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
	R265	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
	R266	1-216-047-00	METAL GLAZE	820	5%	1/10W
	R267	1-216-031-00	METAL GLAZE	180	5%	1/10W
	R268	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
	R269	1-216-017-00	METAL GLAZE	47	5%	1/10W
	R270	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
	R271	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
	R272	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
	R273	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
	R274	1-216-017-00	METAL GLAZE	47	5%	1/10W
	R275	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
	R276	1-216-017-00	METAL GLAZE	47	5%	1/10W
	R277	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
	R278	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
	R279	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
	R280	1-216-025-00	METAL GLAZE	100	5%	1/10W
	R281	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
	R282	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
	R283	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
	R284	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
	R285	1-216-025-00	METAL GLAZE	100	5%	1/10W
	R286	1-216-025-00	METAL GLAZE	100	5%	1/10W
	R287	1-216-025-00	METAL GLAZE	100	5%	1/10W
	R288	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
	R289	1-216-025-00	METAL GLAZE	100	5%	1/10W
	R290	1-216-025-00	METAL GLAZE	100	5%	1/10W
	R291	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
	R293	1-216-025-00	METAL GLAZE	100	5%	1/10W
	R294	1-216-095-00	METAL GLAZE	82K	5%	1/10W
	R295	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
	R296	1-216-095-00	METAL GLAZE	82K	5%	1/10W
	R297	1-216-025-00	METAL GLAZE	100	5%	1/10W
	R298	1-216-073-00	METAL GLAZE	10K	5%	1/10W
	R299	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
	R300	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
	R301	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
	R304	1-216-073-00	METAL GLAZE	10K	5%	1/10W
	R305	1-216-073-00	METAL GLAZE	10K	5%	1/10W

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R306	1-216-073-00	METAL GLAZE	10K 5% 1/10W	C415	1-126-101-11	ELECT	100MF 20% 16V
R307	1-216-025-00	METAL GLAZE	100 5% 1/10W	C416	1-126-101-11	ELECT	100MF 20% 16V
R308	1-216-025-00	METAL GLAZE	100 5% 1/10W	C417	1-124-120-11	ELECT	220MF 20% 16V
R309	1-216-025-00	METAL GLAZE	100 5% 1/10W	C418	1-126-101-11	ELECT	100MF 20% 16V
R310	1-216-025-00	METAL GLAZE	100 5% 1/10W	C419	1-126-101-11	ELECT	100MF 20% 16V
R340	1-216-693-11	METAL CHIP	56K 0.50% 1/10W	C425	1-126-101-11	ELECT	100MF 20% 16V
R341	1-216-001-00	METAL GLAZE	10 5% 1/10W	C450	1-163-113-00	CERAMIC CHIP	68PF 5% 50V
R375	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C451	1-126-103-11	ELECT	470MF 20% 16V
R376	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	C453	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
R377	1-249-393-11	CARBON	10 5% 1/4W	C501	1-124-463-00	ELECT	0.1MF 20% 50V
R379	1-216-073-00	METAL GLAZE	10K 5% 1/10W	C502	1-124-907-11	ELECT	10MF 20% 50V
R380	1-216-073-00	METAL GLAZE	10K 5% 1/10W	C503	1-124-477-11	ELECT	47MF 20% 16V
R381	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C504	1-124-477-11	ELECT	47MF 20% 16V
R382	1-216-095-00	METAL GLAZE	82K 5% 1/10W	C505	1-124-927-11	ELECT	4.7MF 20% 50V
R383	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	C506	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
R384	1-216-017-00	METAL GLAZE	47 5% 1/10W	C507	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
R385	1-216-001-00	METAL GLAZE	10 5% 1/10W	C508	1-124-477-11	ELECT	47MF 20% 16V
R386	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W	C509	1-163-239-11	CERAMIC CHIP	33PF 5% 50V
R387	1-216-017-00	METAL GLAZE	47 5% 1/10W	C510	1-124-477-11	ELECT	47MF 20% 16V
R388	1-216-691-11	METAL CHIP	47K 0.50% 1/10W	C511	1-126-103-11	ELECT	470MF 20% 16V
R398	1-216-017-00	METAL GLAZE	47 5% 1/10W	C512	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
<VARIABLE RESISTOR>				C513	1-124-477-11	ELECT	47MF 20% 16V
RV101	1-230-504-11	RES, ADJ, CARBON	220	C514	1-124-927-11	ELECT	4.7MF 20% 50V
RV102	1-228-993-00	RES, ADJ, CARBON	4.7K	C515	1-124-927-11	ELECT	4.7MF 20% 50V
RV202	1-228-996-00	RES, ADJ, CARBON	47K	C516	1-124-927-11	ELECT	4.7MF 20% 50V
RV203	1-228-993-00	RES, ADJ, CARBON	4.7K	C518	1-124-927-11	ELECT	4.7MF 20% 50V
RV204	1-226-775-11	RES, ADJ, METAL GLAZE	100K	C519	1-124-927-11	ELECT	4.7MF 20% 50V
RV205	1-226-775-11	RES, ADJ, METAL GLAZE	100K	C520	1-124-903-11	ELECT	1MF 20% 50V
<SWITCH>				C521	1-124-907-11	ELECT	10MF 20% 50V
SW101	1-570-859-11	SWITCH, SLIDE		C555	1-163-012-00	CERAMIC CHIP	0.0018MF 10% 50V
<THERMISTER>				C556	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
TH101	1-800-071-XX	THERMISTER		C557	1-163-113-00	CERAMIC CHIP	68PF 5% 50V
<CRYSTAL>				C650	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
X101	1-567-413-11	VIBRATOR, CRYSTAL		C651	1-124-657-00	ELECT	10MF 20% 50V
X102	1-527-789-00	VINRATOR, CRYSTAL		C652	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
*****				C653	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
*A-1135-587-A	BB BOARD, COMPLETE			C654	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
*****				C655	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
*1-564-595-11	PLUG, CONNECTOR 14P			C656	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
*1-568-984-11	CONNECTOR, MALE 96P			C657	1-136-169-00	FILM	0.22MF 5% 50V
<CAPACITOR>				C668	1-124-657-00	ELECT	10MF 20% 50V
C402	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V	C669	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
C404	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V	C670	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
C405	1-126-101-11	ELECT	100MF 20% 16V	C671	1-126-101-11	ELECT	100MF 20% 16V
C406	1-124-120-11	ELECT	220MF 20% 16V	C672	1-126-101-11	ELECT	100MF 20% 16V
C407	1-126-101-11	ELECT	100MF 20% 16V	C673	1-126-101-11	ELECT	100MF 20% 16V
C408	1-124-907-11	ELECT	10MF 20% 50V	C674	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
C409	1-126-101-11	ELECT	100MF 20% 16V	C675	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
C412	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V	C676	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
C413	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V	C677	1-124-910-11	ELECT	47MF 20% 50V
C414	1-124-907-11	ELECT	10MF 20% 50V	C678	1-124-907-11	ELECT	10MF 20% 50V
				C679	1-124-122-11	ELECT	100MF 20% 50V
				C680	1-126-103-11	ELECT	470MF 20% 16V
				C682	1-124-910-11	ELECT	47MF 20% 50V
				C683	1-124-907-11	ELECT	10MF 20% 50V

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C685	1-126-103-11	ELECT 470MF	20% 16V	<IC>			
C686	1-124-122-11	ELECT 100MF	20% 50V	IC401	8-759-800-81	IC LA7016	
C687	1-124-910-11	ELECT 47MF	20% 50V	IC402	8-759-604-39	IC M5F78M12L	
C688	1-124-907-11	ELECT 10MF	20% 50V	IC403	8-759-929-65	IC LM7912CT	
C690	1-126-103-11	ELECT 470MF	20% 16V	IC404	8-759-300-71	IC HD14053BFP	
C691	1-124-122-11	ELECT 100MF	20% 50V	IC405	8-759-926-18	IC SN74HC157ANS	
C692	1-124-122-11	ELECT 100MF	20% 50V	IC407	8-759-926-18	IC SN74HC157ANS	
C693	1-124-122-11	ELECT 100MF	20% 50V	IC408	8-759-300-71	IC HD14053BFP	
C694	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC409	8-759-300-71	IC HD14053BFP	
C695	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC410	8-759-100-96	IC UPC4558G2	
C696	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC411	8-759-100-96	IC UPC4558G2	
C697	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC412	8-759-145-27	IC UPC1406HA	
C901	1-124-907-11	ELECT 10MF	20% 50V	IC413	8-759-008-45	IC MC74HC4538F	
C902	1-124-903-11	ELECT 1MF	20% 50V	IC414	8-759-925-85	IC SN74HC32ANS	
C903	1-126-233-11	ELECT 22MF	20% 50V	IC415	8-749-922-85	IC BX-6475	
C904	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	IC416	8-749-922-85	IC BX-6475	
C905	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC417	8-749-922-85	IC BX-6475	
C906	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	<JACK>			
C907	1-124-903-11	ELECT 1MF	20% 50V	J101	1-566-980-21	CONNECTOR, ROUND TYPE 4P	
C908	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	J102	1-537-257-21	TERMINAL BOARD, INPUT/OUTPUT	
C909	1-124-927-11	ELECT 4.7MF	20% 50V	J103	1-537-255-11	TERMINAL BOARD, INPUT/OUTPUT	
C910	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	<COIL>			
C911	1-124-903-11	ELECT 1MF	20% 50V	L401	1-459-155-00	COIL (WITH CORE) 45UH	
C912	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	L402	1-459-155-00	COIL (WITH CORE) 45UH	
C913	1-163-245-11	CERAMIC CHIP 56PF	5% 50V	L403	1-459-155-00	COIL (WITH CORE) 45UH	
C914	1-126-101-11	ELECT 100MF	20% 16V	L404	1-459-155-00	COIL (WITH CORE) 45UH	
<CAPACITOR>				L405	1-410-671-31	INDUCTOR 47UH	
D401	8-719-900-95	DIODE V09G		L650	1-410-482-31	INDUCTOR 100UH	
D402	8-719-900-95	DIODE V09G		L651	1-410-482-31	INDUCTOR 100UH	
D450	8-719-400-18	DIODE MA152WK		<TRANSISTOR>			
D451	8-719-400-18	DIODE MA152WK		Q401	8-729-140-96	TRANSISTOR 2SD774-34	
D501	8-719-400-18	DIODE MA152WK		Q402	8-729-140-97	TRANSISTOR 2SB734-34	
D502	8-719-400-18	DIODE MA152WK		Q450	8-729-230-49	TRANSISTOR 2SC2712-YG	
D503	8-719-400-18	DIODE MA152WK		Q451	8-729-230-49	TRANSISTOR 2SC2712-YG	
D504	8-719-105-82	DIODE RD5.1M-B2		Q452	8-729-230-49	TRANSISTOR 2SC2712-YG	
D506	8-719-105-82	DIODE RD5.1M-B2		Q453	8-729-901-00	TRANSISTOR DTC124EK	
D507	8-719-105-82	DIODE RD5.1M-B2		Q454	8-729-901-00	TRANSISTOR DTC124EK	
D508	8-719-105-82	DIODE RD5.1M-B2		Q456	8-729-230-49	TRANSISTOR 2SC2712-YG	
D509	8-719-105-82	DIODE RD5.1M-B2		Q457	8-729-230-46	TRANSISTOR 2SA1162-YG	
D510	8-719-105-82	DIODE RD5.1M-B2		Q501	8-729-230-49	TRANSISTOR 2SC2712-YG	
D511	8-719-105-82	DIODE RD5.1M-B2		Q502	8-729-230-49	TRANSISTOR 2SC2712-YG	
D512	8-719-105-82	DIODE RD5.1M-B2		Q503	8-729-230-49	TRANSISTOR 2SC2712-YG	
D513	8-719-105-82	DIODE RD5.1M-B2		Q504	8-729-230-49	TRANSISTOR 2SC2712-YG	
D514	8-719-105-82	DIODE RD5.1M-B2		Q505	8-729-901-01	TRANSISTOR DTC144EK	
D515	8-719-105-82	DIODE RD5.1M-B2		Q506	8-729-112-65	TRANSISTOR 2SA1462-Y33	
D516	8-719-106-80	DIODE RD13M-B2		Q507	8-729-112-65	TRANSISTOR 2SA1462-Y33	
D518	8-719-106-80	DIODE RD13M-B2		Q508	8-729-112-65	TRANSISTOR 2SA1462-Y33	
D520	8-719-105-82	DIODE RD5.1M-B2		Q509	8-729-112-65	TRANSISTOR 2SA1462-Y33	
D521	8-719-105-82	DIODE RD5.1M-B2		Q510	8-729-901-01	TRANSISTOR DTC144EK	
D522	8-719-106-80	DIODE RD13M-B2		Q511	8-729-901-01	TRANSISTOR DTC144EK	
D523	8-719-106-80	DIODE RD13M-B2		Q512	8-729-230-49	TRANSISTOR 2SC2712-YG	
D530	8-719-105-82	DIODE RD5.1M-B2		Q513	8-729-230-49	TRANSISTOR 2SC2712-YG	
D652	8-719-400-18	DIODE MA152WK		Q514	8-729-230-49	TRANSISTOR 2SC2712-YG	
D653	8-719-400-18	DIODE MA152WK		Q515	8-729-230-49	TRANSISTOR 2SC2712-YG	
D901	8-719-400-18	DIODE MA152WK		Q516	8-729-112-65	TRANSISTOR 2SA1462-Y33	
D902	8-719-400-18	DIODE MA152WK					
D903	8-719-104-34	DIODE IS2836					
D904	8-719-400-18	DIODE MA152WK					
D905	8-719-105-XX	DIODE RD6.2M-B1					
D906	8-719-104-34	DIODE IS2836					

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REF.NO.	PART NO.	DESCRIPTION
Q517	8-729-112-65	TRANSISTOR 2SA1462-Y33
Q518	8-729-230-49	TRANSISTOR 2SC2712-YG
Q519	8-729-230-49	TRANSISTOR 2SC2712-YG
Q520	8-729-901-00	TRANSISTOR DTC124EK
Q521	8-729-230-49	TRANSISTOR 2SC2712-YG
Q522	8-729-901-01	TRANSISTOR DTC144EK
Q523	8-729-230-49	TRANSISTOR 2SC2712-YG
Q524	8-729-901-01	TRANSISTOR DTC144EK
Q525	8-729-901-01	TRANSISTOR DTC144EK
Q526	8-729-901-01	TRANSISTOR DTC144EK
Q527	8-729-901-01	TRANSISTOR DTC144EK
Q528	8-729-901-01	TRANSISTOR DTC144EK
Q529	8-729-901-01	TRANSISTOR DTC144EK
Q530	8-729-901-01	TRANSISTOR DTC144EK
Q531	8-729-901-01	TRANSISTOR DTC144EK
Q537	8-729-901-01	TRANSISTOR DTC144EK
Q538	8-729-901-01	TRANSISTOR DTC144EK
Q539	8-729-901-01	TRANSISTOR DTC144EK
Q540	8-729-901-01	TRANSISTOR DTC144EK
Q541	8-729-320-62	TRANSISTOR 2SD789-34
Q542	8-729-901-01	TRANSISTOR DTC144EK
Q650	8-729-902-96	TRANSISTOR FMS1
Q651	8-729-902-96	TRANSISTOR FMS1
Q652	8-729-112-65	TRANSISTOR 2SA1462-Y33
Q653	8-729-901-00	TRANSISTOR DTC124EK
Q654	8-729-112-65	TRANSISTOR 2SA1462-Y33
Q655	8-729-112-65	TRANSISTOR 2SA1462-Y33
Q656	8-729-901-00	TRANSISTOR DTC124EK
Q657	8-729-107-31	TRANSISTOR 2SC3545-T43
Q658	8-729-107-31	TRANSISTOR 2SC3545-T43
Q659	8-729-107-31	TRANSISTOR 2SC3545-T43
Q660	8-729-107-31	TRANSISTOR 2SC3545-T43
Q661	8-729-107-31	TRANSISTOR 2SC3545-T43
Q662	8-729-107-31	TRANSISTOR 2SC3545-T43
Q663	8-729-112-65	TRANSISTOR 2SA1462-Y33
Q664	8-729-107-31	TRANSISTOR 2SC3545-T43
Q665	8-729-112-65	TRANSISTOR 2SA1462-Y33
Q666	8-729-116-06	TRANSISTOR 2SK160-K6
Q667	8-729-107-31	TRANSISTOR 2SC3545-T43
Q668	8-729-112-65	TRANSISTOR 2SA1462-Y33
Q669	8-729-112-65	TRANSISTOR 2SA1462-Y33
Q670	8-729-112-65	TRANSISTOR 2SA1462-Y33
Q671	8-729-901-00	TRANSISTOR DTC124EK
Q672	8-729-901-00	TRANSISTOR DTC124EK
Q673	8-729-107-31	TRANSISTOR 2SC3545-T43
Q674	8-729-107-31	TRANSISTOR 2SC3545-T43
Q675	8-729-107-31	TRANSISTOR 2SC3545-T43
Q676	8-729-107-31	TRANSISTOR 2SC3545-T43
Q677	8-729-107-31	TRANSISTOR 2SC3545-T43
Q678	8-729-107-31	TRANSISTOR 2SC3545-T43
Q679	8-729-107-31	TRANSISTOR 2SC3545-T43
Q680	8-729-107-31	TRANSISTOR 2SC3545-T43
Q681	8-729-107-31	TRANSISTOR 2SC3545-T43
Q687	8-729-112-65	TRANSISTOR 2SA1462-Y33
Q688	8-729-112-65	TRANSISTOR 2SA1462-Y33
Q689	8-729-901-00	TRANSISTOR DTC124EK
Q690	8-729-901-00	TRANSISTOR DTC124EK
Q691	8-729-107-31	TRANSISTOR 2SC3545-T43
Q692	8-729-107-31	TRANSISTOR 2SC3545-T43
Q693	8-729-107-31	TRANSISTOR 2SC3545-T43
Q694	8-729-107-31	TRANSISTOR 2SC3545-T43
Q695	8-729-107-31	TRANSISTOR 2SC3545-T43

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q696	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q697	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q698	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q699	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q706	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q707	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q708	8-729-901-00	TRANSISTOR DTC124EK	
Q709	8-729-901-00	TRANSISTOR DTC124EK	
Q710	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q711	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q712	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q713	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q714	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q715	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q716	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q717	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q718	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q724	8-729-116-06	TRANSISTOR 2SK160-K6	
Q725	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q726	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q727	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q728	8-729-923-06	TRANSISTOR FMW-8	
Q729	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q730	8-729-923-06	TRANSISTOR FMW-8	
Q731	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q732	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q733	8-729-901-00	TRANSISTOR DTC124EK	
Q734	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q735	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q736	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q737	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q738	8-729-116-06	TRANSISTOR 2SK160-K6	
Q739	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q740	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q901	8-729-903-10	TRANSISTOR FMW1	
Q902	8-729-903-10	TRANSISTOR FMW1	
Q903	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q904	8-729-901-00	TRANSISTOR DTC124EK	
Q905	8-729-112-65	TRANSISTOR 2SA1462-Y33	
Q906	8-729-162-13	TRANSISTOR 2SC1621-B3	
Q907	8-729-902-96	TRANSISTOR FMS1	
Q908	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q909	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q910	8-729-902-96	TRANSISTOR FMS1	
Q911	8-729-162-13	TRANSISTOR 2SC1621-B3	
Q912	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q913	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q914	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q915	8-729-902-96	TRANSISTOR FMS1	
Q916	8-729-904-04	TRANSISTOR FMS2	
Q918	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q919	8-729-903-10	TRANSISTOR FMW1	
Q920	8-729-107-31	TRANSISTOR 2SC3545-T43	
Q921	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q922	8-729-902-96	TRANSISTOR FMS1	
Q924	8-729-230-49	TRANSISTOR 2SC2712-YG	

<RESISTOR>

R401	1-216-025-00	METAL GLAZE	100	5%	1/10W
R403	1-216-025-00	METAL GLAZE	100	5%	1/10W
R450	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R451	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R452	1-216-037-00	METAL GLAZE	330	5%	1/10W

BB

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R453	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R545	1-216-025-00	METAL GLAZE	100 5% 1/10W
R454	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R546	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R455	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R547	1-216-631-11	METAL CHIP	150 0.50% 1/10W
R456	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R548	1-216-025-00	METAL GLAZE	100 5% 1/10W
R459	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R549	1-216-025-00	METAL GLAZE	100 5% 1/10W
R460	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R550	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R461	1-216-025-00	METAL GLAZE	100 5% 1/10W	R551	1-216-025-00	METAL GLAZE	100 5% 1/10W
R462	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R552	1-216-025-00	METAL GLAZE	100 5% 1/10W
R463	1-216-025-00	METAL GLAZE	100 5% 1/10W	R553	1-216-025-00	METAL GLAZE	100 5% 1/10W
R464	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R554	1-216-025-00	METAL GLAZE	100 5% 1/10W
R466	1-216-037-00	METAL GLAZE	330 5% 1/10W	R555	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R467	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R556	1-216-025-00	METAL GLAZE	100 5% 1/10W
R468	1-216-025-00	METAL GLAZE	100 5% 1/10W	R557	1-216-025-00	METAL GLAZE	100 5% 1/10W
R469	1-216-025-00	METAL GLAZE	100 5% 1/10W	R558	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R470	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R559	1-216-631-11	METAL CHIP	150 0.50% 1/10W
R471	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R560	1-216-025-00	METAL GLAZE	100 5% 1/10W
R472	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R561	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R473	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R562	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R474	1-216-025-00	METAL GLAZE	100 5% 1/10W	R563	1-216-637-11	METAL CHIP	270 0.50% 1/10W
R501	1-216-624-11	METAL CHIP	75 0.50% 1/10W	R564	1-216-645-11	METAL CHIP	560 0.50% 1/10W
R502	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R565	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R503	1-216-025-00	METAL GLAZE	100 5% 1/10W	R566	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R504	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R567	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R505	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R568	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R506	1-216-624-11	METAL CHIP	75 0.50% 1/10W	R569	1-216-295-00	METAL GLAZE	0 5% 1/10W
R507	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R570	1-216-624-11	METAL CHIP	75 0.50% 1/10W
R508	1-216-025-00	METAL GLAZE	100 5% 1/10W	R571	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R509	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R572	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R510	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R573	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R511	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R574	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R512	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R575	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R513	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R576	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R514	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	R577	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R515	1-216-025-00	METAL GLAZE	100 5% 1/10W	R578	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R516	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R579	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R517	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R580	1-216-025-00	METAL GLAZE	100 5% 1/10W
R518	1-216-025-00	METAL GLAZE	100 5% 1/10W	R581	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R519	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R584	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R520	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R585	1-216-025-00	METAL GLAZE	100 5% 1/10W
R521	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R586	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R522	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R587	1-216-025-00	METAL GLAZE	100 5% 1/10W
R523	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R588	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R524	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R589	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R525	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R590	1-216-025-00	METAL GLAZE	100 5% 1/10W
R526	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R591	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R527	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R592	1-216-025-00	METAL GLAZE	100 5% 1/10W
R528	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R593	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R529	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R594	1-216-025-00	METAL GLAZE	100 5% 1/10W
R530	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R595	1-216-693-11	METAL CHIP	56K 0.50% 1/10W
R531	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R596	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
R532	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R597	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R533	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R598	1-216-025-00	METAL GLAZE	100 5% 1/10W
R534	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R599	1-216-025-00	METAL GLAZE	100 5% 1/10W
R535	1-216-001-00	METAL GLAZE	10 5% 1/10W	R600	1-216-025-00	METAL GLAZE	100 5% 1/10W
R536	1-216-001-00	METAL GLAZE	10 5% 1/10W	R601	1-216-631-11	METAL CHIP	150 0.50% 1/10W
R537	1-216-001-00	METAL GLAZE	10 5% 1/10W	R602	1-216-631-11	METAL CHIP	150 0.50% 1/10W
R538	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R603	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R539	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R604	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R540	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R605	1-216-025-00	METAL GLAZE	100 5% 1/10W
R541	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R606	1-216-025-00	METAL GLAZE	100 5% 1/10W
R542	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R607	1-216-117-00	METAL GLAZE	680K 5% 1/10W
R543	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R608	1-216-099-00	METAL GLAZE	120K 5% 1/10W
R544	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W	R609	1-216-025-00	METAL GLAZE	100 5% 1/10W
				R610	1-216-073-00	METAL GLAZE	10K 5% 1/10W
				R650	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W

BB

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R651	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R715	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R652	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R720	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R653	1-216-025-00	METAL GLAZE	100 5% 1/10W	R728	1-216-624-11	METAL CHIP	75 0.50% 1/10W
R654	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R729	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R655	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R730	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R656	1-216-025-00	METAL GLAZE	100 5% 1/10W	R731	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R657	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R732	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R658	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R733	1-216-025-00	METAL GLAZE	100 5% 1/10W
R659	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R734	1-216-624-11	METAL CHIP	75 0.50% 1/10W
R660	1-216-631-11	METAL CHIP	150 0.50% 1/10W	R735	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R661	1-216-631-11	METAL CHIP	150 0.50% 1/10W	R736	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R662	1-216-295-00	METAL GLAZE	0 5% 1/10W	R737	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R663	1-216-629-11	METAL CHIP	120 0.50% 1/10W	R738	1-216-025-00	METAL GLAZE	100 5% 1/10W
R664	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	R739	1-216-017-00	METAL GLAZE	47 5% 1/10W
R665	1-216-013-00	METAL GLAZE	33 5% 1/10W	R740	1-216-025-00	METAL GLAZE	100 5% 1/10W
R666	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R741	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R667	1-216-645-11	METAL CHIP	560 0.50% 1/10W	R742	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R668	1-216-033-00	METAL GLAZE	220 5% 1/10W	R743	1-216-025-00	METAL GLAZE	100 5% 1/10W
R669	1-216-017-00	METAL GLAZE	47 5% 1/10W	R744	1-216-017-00	METAL GLAZE	47 5% 1/10W
R670	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R745	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R671	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R746	1-216-625-11	METAL CHIP	82 0.50% 1/10W
R672	1-216-631-11	METAL CHIP	150 0.50% 1/10W	R747	1-216-025-00	METAL GLAZE	100 5% 1/10W
R673	1-216-017-00	METAL GLAZE	47 5% 1/10W	R748	1-216-665-11	METAL CHIP	3.9K 0.50% 1/10W
R674	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R749	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R675	1-216-017-00	METAL GLAZE	47 5% 1/10W	R750	1-216-629-11	METAL CHIP	120 0.50% 1/10W
R676	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R751	1-216-047-00	METAL GLAZE	820 5% 1/10W
R677	1-216-631-11	METAL CHIP	150 0.50% 1/10W	R752	1-216-025-00	METAL GLAZE	100 5% 1/10W
R678	1-216-017-00	METAL GLAZE	47 5% 1/10W	R753	1-216-025-00	METAL GLAZE	100 5% 1/10W
R679	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R754	1-216-047-00	METAL GLAZE	820 5% 1/10W
R680	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R755	1-216-025-00	METAL GLAZE	100 5% 1/10W
R681	1-216-017-00	METAL GLAZE	47 5% 1/10W	R756	1-216-025-00	METAL GLAZE	100 5% 1/10W
R682	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R757	1-216-025-00	METAL GLAZE	100 5% 1/10W
R683	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R758	1-216-025-00	METAL GLAZE	100 5% 1/10W
R684	1-216-017-00	METAL GLAZE	47 5% 1/10W	R759	1-216-025-00	METAL GLAZE	100 5% 1/10W
R685	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R760	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R686	1-216-025-00	METAL GLAZE	100 5% 1/10W	R761	1-216-645-11	METAL CHIP	560 0.50% 1/10W
R687	1-216-624-11	METAL CHIP	75 0.50% 1/10W	R762	1-216-645-11	METAL CHIP	560 0.50% 1/10W
R688	1-216-025-00	METAL GLAZE	100 5% 1/10W	R763	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R689	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R764	1-216-025-00	METAL GLAZE	100 5% 1/10W
R690	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R765	1-216-037-00	METAL GLAZE	330 5% 1/10W
R691	1-216-627-11	METAL CHIP	100 0.50% 1/10W	R766	1-216-025-00	METAL GLAZE	100 5% 1/10W
R692	1-216-627-11	METAL CHIP	100 0.50% 1/10W	R767	1-216-017-00	METAL GLAZE	47 5% 1/10W
R693	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R768	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R694	1-216-025-00	METAL GLAZE	100 5% 1/10W	R770	1-216-017-00	METAL GLAZE	47 5% 1/10W
R695	1-216-025-00	METAL GLAZE	100 5% 1/10W	R771	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R696	1-216-047-00	METAL GLAZE	820 5% 1/10W	R772	1-216-647-11	METAL CHIP	680 0.50% 1/10W
R697	1-216-047-00	METAL GLAZE	820 5% 1/10W	R773	1-216-624-11	METAL CHIP	75 0.50% 1/10W
R698	1-216-025-00	METAL GLAZE	100 5% 1/10W	R775	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R699	1-216-025-00	METAL GLAZE	100 5% 1/10W	R776	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R701	1-216-025-00	METAL GLAZE	100 5% 1/10W	R777	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R702	1-216-025-00	METAL GLAZE	100 5% 1/10W	R778	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R703	1-216-651-11	METAL CHIP	1K 0.50% 1/10W	R779	1-216-624-11	METAL CHIP	75 0.50% 1/10W
R704	1-216-037-00	METAL GLAZE	330 5% 1/10W	R790	1-216-025-00	METAL GLAZE	100 5% 1/10W
R705	1-216-025-00	METAL GLAZE	100 5% 1/10W	R791	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R706	1-216-017-00	METAL GLAZE	47 5% 1/10W	R792	1-216-121-00	METAL GLAZE	1M 5% 1/10W
R707	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R793	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R708	1-216-025-00	METAL GLAZE	100 5% 1/10W	R794	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R709	1-216-645-11	METAL CHIP	560 0.50% 1/10W	R795	1-216-627-11	METAL CHIP	100 0.50% 1/10W
R710	1-216-645-11	METAL CHIP	560 0.50% 1/10W	R796	1-216-665-11	METAL CHIP	3.9K 0.50% 1/10W
R711	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R797	1-216-643-11	METAL CHIP	470 0.50% 1/10W
R713	1-216-017-00	METAL GLAZE	47 5% 1/10W	R798	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R714	1-216-647-11	METAL CHIP	680 0.50% 1/10W	R799	1-216-025-00	METAL GLAZE	100 5% 1/10W
				R801	1-216-047-00	METAL GLAZE	820 5% 1/10W
				R802	1-216-025-00	METAL GLAZE	100 5% 1/10W
				R803	1-216-047-00	METAL GLAZE	820 5% 1/10W

BB CA(B)

REF.NO.	PART NO.	DESCRIPTION			
R804	1-216-025-00	METAL GLAZE	100	5%	1/10W
R805	1-216-025-00	METAL GLAZE	100	5%	1/10W
R806	1-216-025-00	METAL GLAZE	100	5%	1/10W
R807	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R808	1-216-025-00	METAL GLAZE	100	5%	1/10W
R809	1-216-025-00	METAL GLAZE	100	5%	1/10W
R810	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R811	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R812	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R813	1-216-025-00	METAL GLAZE	100	5%	1/10W
R814	1-216-037-00	METAL GLAZE	330	5%	1/10W
R815	1-216-025-00	METAL GLAZE	100	5%	1/10W
R816	1-216-017-00	METAL GLAZE	47	5%	1/10W
R817	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R819	1-216-017-00	METAL GLAZE	47	5%	1/10W
R820	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R821	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R829	1-216-624-11	METAL CHIP	75	0.50%	1/10W
R830	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R832	1-216-121-00	METAL GLAZE	1M	5%	1/10W
R836	1-216-631-11	METAL CHIP	150	0.50%	1/10W
R837	1-216-631-11	METAL CHIP	150	0.50%	1/10W
R901	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R902	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W
R903	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R904	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R905	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R906	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R907	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R908	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R909	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R910	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R911	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R912	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R913	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R914	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R915	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R917	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R918	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R919	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R920	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R921	1-216-039-00	METAL GLAZE	390	5%	1/10W
R922	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R923	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R924	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R925	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R926	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R927	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R928	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R929	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R930	1-216-025-00	METAL GLAZE	100	5%	1/10W
R931	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R932	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R933	1-216-039-00	METAL GLAZE	390	5%	1/10W
R934	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R935	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R936	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R937	1-216-031-00	METAL GLAZE	180	5%	1/10W
R938	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R939	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R940	1-216-039-00	METAL GLAZE	390	5%	1/10W
R941	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W

REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	R942	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
	R943	1-216-645-11	METAL CHIP 560 0.50% 1/10W	
	R944	1-216-665-11	METAL CHIP 3.9K 0.50% 1/10W	
	R945	1-216-651-11	METAL CHIP 1K 0.50% 1/10W	
	R950	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
	R961	1-216-025-00	METAL GLAZE 100 5% 1/10W	
			<RELAY>	
	RL401	1-515-757-11	RELAY	
	RL402	1-515-757-11	RELAY	
	RL403	1-515-757-11	RELAY	
			<VARIABLE RESISTOR>	
	RV901	1-228-994-00	RES, ADJ, CARBON 10K	
			<SWITCH>	
	SW1	1-570-859-11	SWITCH, SLIDE	

		*A-1335-014-A	CA(B) BOARD, COMPLETE	

		*1-526-575-00	SOCKET, PLUG 1P	
		1-564-507-11	PLUG, CONNECTOR 4P	
		*1-564-516-11	PLUG, CONNECTOR 13P	
			<CAPACITOR>	
	C30	1-126-101-11	ELECT 100MF 20% 16V	
	C31	1-126-101-11	ELECT 100MF 20% 16V	
	C32	1-126-233-11	ELECT 22MF 20% 50V	
	C33	1-126-233-11	ELECT 22MF 20% 50V	
	C34	1-101-004-00	CERAMIC 0.01MF 50V	
	C35	1-124-927-11	ELECT 4.7MF 20% 50V	
	C36	1-126-101-11	ELECT 100MF 20% 16V	
	C37	1-126-233-11	ELECT 22MF 20% 50V	
	C38	1-101-004-00	CERAMIC 0.01MF 50V	
	C39	1-102-978-00	CERAMIC 220PF 5% 50V	
	C40	1-102-978-00	CERAMIC 220PF 5% 50V	
	C41	1-102-973-00	CERAMIC 100PF 5% 50V	
	C42	1-162-117-00	CERAMIC 100PF 10% 500V	
	C43	1-101-004-00	CERAMIC 0.01MF 50V	
	C44	1-126-233-11	ELECT 22MF 20% 50V	
	C45	1-101-004-00	CERAMIC 0.01MF 50V	
	C46	1-126-233-11	ELECT 22MF 20% 50V	
	C47	1-126-134-11	ELECT 4.7MF 20% 350V	
	C48	1-123-932-00	ELECT 4.7MF 20% 160V	
	C49	1-124-798-11	ELECT 1MF 20% 160V	
	C50	1-124-798-11	ELECT 1MF 20% 160V	
	C51	1-102-050-00	CERAMIC 0.01MF 99% 500V	
	C52	1-102-050-00	CERAMIC 0.01MF 99% 500V	
	C53	1-124-903-11	ELECT 1MF 20% 50V	
	C301	1-124-282-00	ELECT 22MF 20% 16V	
	C302	1-124-910-11	ELECT 47MF 20% 50V	
	C303	1-126-101-11	ELECT 100MF 20% 16V	
	C304	1-126-101-11	ELECT 100MF 20% 16V	
	C305	1-126-233-11	ELECT 22MF 20% 50V	
	C306	1-102-973-00	CERAMIC 100PF 5% 50V	
	C307	1-102-976-00	CERAMIC 180PF 5% 50V	
	C308	1-124-799-11	ELECT 2.2MF 20% 160V	
	C309	1-124-799-11	ELECT 2.2MF 20% 160V	
	C310	1-124-634-11	ELECT 1MF 20% 250V	
	C311	1-126-233-11	ELECT 22MF 20% 50V	

CA(B)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C312	1-136-165-00	FILM 0.1MF	5%	50V	Q35	8-729-119-78	TRANSISTOR 2SC2785-HFE
C313	1-136-165-00	FILM 0.1MF	5%	50V	Q36	8-729-820-82	TRANSISTOR 2SA1208-S
C314	1-126-174-51	ELECT 10MF	20%	350V	Q37	8-729-820-82	TRANSISTOR 2SA1208-S
C315	1-102-038-00	CERAMIC 0.001MF		500V	Q38	8-729-255-12	TRANSISTOR 2SC2551-0
C316	1-102-050-00	CERAMIC 0.01MF	99%	500V	Q39	8-729-255-12	TRANSISTOR 2SC2551-0
C317	1-124-768-11	ELECT 4.7MF	20%	50V	Q40	8-729-820-82	TRANSISTOR 2SA1208-S
C318	1-101-004-00	CERAMIC 0.01MF		50V	Q41	8-729-903-68	TRANSISTOR 2SD982
C319	1-136-165-00	FILM 0.1MF	5%	50V	Q42	8-729-801-88	TRANSISTOR 2SA1381-E
C320	1-124-903-11	ELECT 1MF	20%	50V	Q43	8-729-900-63	TRANSISTOR DTA124ES
C321	1-126-233-11	ELECT 22MF	20%	50V	Q301	8-729-119-78	TRANSISTOR 2SC2785-HFE
C322	1-126-233-11	ELECT 22MF	20%	50V	Q302	8-729-140-50	TRANSISTOR 2SC3209LK
C323	1-126-233-11	ELECT 22MF	20%	50V	Q303	8-729-801-88	TRANSISTOR 2SA1381-E
C324	1-102-973-00	CERAMIC 100PF	5%	50V	Q304	8-729-801-88	TRANSISTOR 2SA1381-E
C327	1-101-004-00	CERAMIC 0.01MF		50V	Q305	8-729-119-78	TRANSISTOR 2SC2785-HFE
C350	1-126-101-11	ELECT 100MF	20%	16V	Q306	8-729-140-50	TRANSISTOR 2SC3209LK
C351	1-126-101-11	ELECT 100MF	20%	16V	Q307	8-729-801-88	TRANSISTOR 2SA1381-E
<DIODE>				Q308	8-729-900-36	TRANSISTOR DTC124ES	
D30	8-719-911-19	DIODE 1SS119		Q309	8-729-900-36	TRANSISTOR DTC124ES	
D31	8-719-901-83	DIODE 1SS83		Q310	8-729-900-63	TRANSISTOR DTA124ES	
D32	8-719-901-83	DIODE 1SS83		Q311	8-729-105-74	TRANSISTOR 2SK523-M1	
D33	8-719-911-19	DIODE 1SS119		Q312	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D34	8-719-911-19	DIODE 1SS119		Q313	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D35	8-719-900-95	DIODE V09G		Q314	8-729-900-63	TRANSISTOR DTA124ES	
D36	8-719-900-95	DIODE V09G		<RESISTOR>			
D37	8-719-971-20	DIODE ERC38-06		R50	1-249-421-11	CARBON 2.2K 5%	1/4W
D38	8-719-110-31	DIODE RD12ESB2		R51	1-249-427-11	CARBON 6.8K 5%	1/4W
D39	8-719-901-83	DIODE 1SS83		R52	1-249-393-11	CARBON 10 5%	1/4W
D301	8-719-901-83	DIODE 1SS83		R53	1-249-427-11	CARBON 6.8K 5%	1/4W
D303	8-719-109-51	DIODE RD2.0ESB2		R54	1-215-437-00	METAL 4.7K 1%	1/4W
D304	8-719-911-19	DIODE 1SS119		R55	1-215-439-00	METAL 5.6K 1%	1/4W
D305	8-719-901-83	DIODE 1SS83		R56	1-215-467-00	METAL 82K 1%	1/4W
D306	8-719-911-19	DIODE 1SS119		R57	1-249-405-11	CARBON 100 5%	1/4W
D307	8-719-911-19	DIODE 1SS119		R58	1-249-441-11	CARBON 100K 5%	1/4W
D309	8-719-911-19	DIODE 1SS119		R59	1-249-429-11	CARBON 10K 5%	1/4W
D310	8-719-109-51	DIODE RD2.0ESB2		R60	1-249-425-11	CARBON 4.7K 5%	1/4W
D311	8-719-911-19	DIODE 1SS119		R61	1-249-429-11	CARBON 10K 5%	1/4W
D312	8-719-911-19	DIODE 1SS119		R62	1-249-429-11	CARBON 10K 5%	1/4W
D313	8-719-911-19	DIODE 1SS119		R63	1-249-421-11	CARBON 2.2K 5%	1/4W
D314	8-719-110-36	DIODE RD13ESB2		R64	1-249-425-11	CARBON 4.7K 5%	1/4W
D315	8-719-109-66	DIODE RD3.3ESB2		R65	1-249-425-11	CARBON 4.7K 5%	1/4W
D316	8-719-911-19	DIODE 1SS119		R66	1-249-417-11	CARBON 1K 5%	1/4W F
<IC>				R67	1-249-403-11	CARBON 68 5%	1/4W
IC301	8-749-922-43	IC VPH05A		R68	1-249-397-11	CARBON 22 5%	1/4W F
IC302	8-759-990-82	IC TL082CP		R69	1-249-397-11	CARBON 22 5%	1/4W F
IC303	8-749-920-88	IC SNY-8C02		R70	1-249-399-11	CARBON 33 5%	1/4W
IC304	8-749-923-15	IC TY885002A		R71	1-249-399-11	CARBON 33 5%	1/4W
IC305	8-749-921-91	IC TY885003A		R72	1-249-397-11	CARBON 22 5%	1/4W F
<COIL>				R73	1-249-403-11	CARBON 68 5%	1/4W
L301	1-408-880-00	INDUCTOR 0.68UH		R74	1-249-429-11	CARBON 10K 5%	1/4W F
<TRANSISTOR>				R75	1-249-429-11	CARBON 10K 5%	1/4W F
Q30	8-729-119-78	TRANSISTOR 2SC2785-HFE		R76	1-202-719-00	SOLID 1M 10%	1/2W
Q31	8-729-119-78	TRANSISTOR 2SC2785-HFE		R77	1-247-903-00	CARBON 1M 5%	1/4W
Q32	8-729-119-76	TRANSISTOR 2SA1175-HFE		R78	1-249-441-11	CARBON 100K 5%	1/4W
Q33	8-729-119-78	TRANSISTOR 2SC2785-HFE		R301	1-215-401-11	METAL 150 1%	1/4W
Q34	8-729-119-76	TRANSISTOR 2SA1175-HFE		R302	1-215-401-11	METAL 150 1%	1/4W
				R303	1-215-461-00	METAL 47K 1%	1/4W
				R304	1-215-469-00	METAL 100K 1%	1/4W
				R305	1-215-469-00	METAL 100K 1%	1/4W
				R306	1-215-473-00	METAL 150K 1%	1/4W
				R307	1-249-421-11	CARBON 2.2K 5%	1/4W
				R308	1-249-403-11	CARBON 68 5%	1/4W
				R309	1-215-429-00	METAL 2.2K 1%	1/4W
				R311	1-249-421-11	CARBON 2.2K 5%	1/4W
				R312	1-215-383-00	METAL 27 1%	1/4W

CA(B) CA(RG)

REF.NO.	PART NO.	DESCRIPTION			REMARK	REF.NO.	PART NO.	DESCRIPTION			REMARK
R316	1-215-473-00	METAL	150K	1%	1/4W	C11	1-101-004-00	CERAMIC	0.01MF		50V
R317	1-249-421-11	CARBON	2.2K	5%	1/4W	C12	1-101-004-00	CERAMIC	0.01MF		50V
R318	1-249-427-11	CARBON	6.8K	5%	1/4W	C13	1-101-004-00	CERAMIC	0.01MF		50V
R319	1-215-453-00	METAL	22K	1%	1/4W	C14	1-126-233-11	ELECT	22MF	20%	50V
R320	1-215-469-00	METAL	100K	1%	1/4W	C15	1-102-963-00	CERAMIC	33PF	5%	50V
R321	1-215-471-00	METAL	120K	1%	1/4W	C16	1-126-233-11	ELECT	22MF	20%	50V
R322	1-215-441-00	METAL	6.8K	1%	1/4W	C17	1-136-165-00	FILM	0.1MF	5%	50V
R323	1-215-481-00	METAL	330K	1%	1/4W	C18	1-136-165-00	FILM	0.1MF	5%	50V
R324	1-215-433-00	METAL	3.3K	1%	1/4W	C19	1-136-165-00	FILM	0.1MF	5%	50V
R325	1-249-431-11	CARBON	15K	5%	1/4W	C20	1-136-165-00	FILM	0.1MF	5%	50V
R326	1-249-431-11	CARBON	15K	5%	1/4W	C21	1-126-233-11	ELECT	22MF	20%	50V
R327	1-249-415-11	CARBON	680	5%	1/4W	C22	1-126-103-11	ELECT	470MF	20%	16V
R328	1-249-405-11	CARBON	100	5%	1/4W	C23	1-136-171-00	FILM	0.33MF	5%	50V
R329	1-249-409-11	CARBON	220	5%	1/4W	C101	1-124-282-00	ELECT	22MF	20%	16V
R330	1-215-431-00	METAL	2.7K	1%	1/4W	C102	1-124-477-11	ELECT	47MF	20%	16V
R331	1-202-549-00	SOLID	100	5%	1/2W	C103	1-126-101-11	ELECT	100MF	20%	16V
R332	1-202-818-00	SOLID	1K	10%	1/2W	C104	1-126-101-11	ELECT	100MF	20%	16V
R333	1-249-421-11	CARBON	2.2K	5%	1/4W	C105	1-126-233-11	ELECT	22MF	20%	50V
R334	1-215-469-00	METAL	100K	1%	1/4W	C106	1-102-973-00	CERAMIC	100PF	5%	50V
R335	1-249-429-11	CARBON	10K	5%	1/4W	C107	1-102-976-00	CERAMIC	180PF	5%	50V
R336	1-202-549-00	SOLID	100	5%	1/2W	C108	1-124-799-11	ELECT	2.2MF	20%	160V
R337	1-215-443-00	METAL	8.2K	1%	1/4W	C109	1-124-799-11	ELECT	2.2MF	20%	160V
R338	1-215-435-00	METAL	3.9K	1%	1/4W	C110	1-124-634-11	ELECT	1MF	20%	250V
R339	1-249-421-11	CARBON	2.2K	5%	1/4W	C111	1-126-233-11	ELECT	22MF	20%	50V
R340	1-215-453-00	METAL	22K	1%	1/4W	C112	1-136-165-00	FILM	0.1MF	5%	50V
R341	1-215-421-00	METAL	1K	1%	1/4W	C113	1-136-165-00	FILM	0.1MF	5%	50V
R342	1-249-417-11	CARBON	1K	5%	1/4W	C114	1-126-174-51	ELECT	10MF	20%	350V
R343	1-247-903-00	CARBON	1M	5%	1/4W	C115	1-102-038-00	CERAMIC	0.001MF		500V
R344	1-249-427-11	CARBON	6.8K	5%	1/4W	C116	1-102-050-00	CERAMIC	0.01MF	99%	500V
R345	1-249-405-11	CARBON	100	5%	1/4W	C117	1-124-768-11	ELECT	4.7MF	20%	50V
R346	1-247-895-00	CARBON	470K	5%	1/4W	C118	1-101-004-00	CERAMIC	0.01MF		50V
R347	1-249-405-11	CARBON	100	5%	1/4W	C119	1-136-165-00	FILM	0.1MF	5%	50V
R348	1-247-903-00	CARBON	1M	5%	1/4W	C120	1-124-903-11	ELECT	1MF	20%	50V
R349	1-249-423-11	CARBON	3.3K	5%	1/4W	C121	1-126-233-11	ELECT	22MF	20%	50V
R351	1-215-447-00	METAL	12K	1%	1/4W	C122	1-126-233-11	ELECT	22MF	20%	50V
R352	1-249-421-11	CARBON	2.2K	5%	1/4W	C123	1-126-233-11	ELECT	22MF	20%	50V
R353	1-249-403-11	CARBON	68	5%	1/4W	C127	1-101-004-00	CERAMIC	0.01MF		50V
R356	1-215-461-00	METAL	47K	1%	1/4W	C201	1-124-282-00	ELECT	22MF	20%	16V
*****						C202	1-126-233-11	ELECT	22MF	20%	50V
*****						C203	1-126-101-11	ELECT	100MF	20%	16V
*A-1335-015-A CA(RG) BOARD, COMPLETE						C204	1-126-101-11	ELECT	100MF	20%	16V
*****						C205	1-126-233-11	ELECT	22MF	20%	50V
*1-526-575-00 SOCKET, PLUG 1P						C206	1-102-973-00	CERAMIC	100PF	5%	50V
1-564-507-11 PLUG, CONNECTOR 4P						C207	1-102-976-00	CERAMIC	180PF	5%	50V
*1-564-514-11 PLUG, CONNECTOR 11P						C208	1-124-799-11	ELECT	2.2MF	20%	160V
*1-564-515-11 PLUG, CONNECTOR 12P						C209	1-124-799-11	ELECT	2.2MF	20%	160V
*1-564-516-11 PLUG, CONNECTOR 13P						C210	1-124-634-11	ELECT	1MF	20%	250V
*1-568-979-11 CONNECTOR 30P						C211	1-126-233-11	ELECT	22MF	20%	50V
*4-363-404-00 HOLDER, IC						C212	1-136-165-00	FILM	0.1MF	5%	50V
4-391-519-01 SHEET (E), INSULATOR						C213	1-136-165-00	FILM	0.1MF	5%	50V
<CAPACITOR>						C214	1-126-174-51	ELECT	10MF	20%	350V
C1	1-124-907-11	ELECT	10MF	20%	50V	C215	1-102-038-00	CERAMIC	0.001MF		500V
C2	1-126-101-11	ELECT	100MF	20%	16V	C216	1-102-050-00	CERAMIC	0.01MF	99%	500V
C3	1-124-907-11	ELECT	10MF	20%	50V	C217	1-124-768-11	ELECT	4.7MF	20%	50V
C4	1-126-101-11	ELECT	100MF	20%	16V	C218	1-101-004-00	CERAMIC	0.01MF		50V
C5	1-126-233-11	ELECT	22MF	20%	50V	C219	1-136-165-00	FILM	0.1MF	5%	50V
C6	1-126-101-11	ELECT	100MF	20%	16V	C220	1-124-903-11	ELECT	1MF	20%	50V
C7	1-126-233-11	ELECT	22MF	20%	50V	C221	1-126-233-11	ELECT	22MF	20%	50V
C8	1-102-820-00	CERAMIC	330PF	5%	50V	C222	1-126-233-11	ELECT	22MF	20%	50V
C9	1-101-880-00	CERAMIC	47PF	5%	50V	C223	1-126-233-11	ELECT	22MF	20%	50V
C10	1-101-004-00	CERAMIC	0.01MF		50V	C227	1-101-004-00	CERAMIC	0.01MF		50V

CA(RG)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<DIODE>				<TRANSISTOR>			
D1	8-719-900-95	DIODE V09G		Q1	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D2	8-719-900-95	DIODE V09G		Q2	8-729-900-36	TRANSISTOR DTC124ES	
D3	8-719-109-89	DIODE RD5.6ESB2		Q3	8-729-900-36	TRANSISTOR DTC124ES	
D4	8-719-911-19	DIODE 1SS119		Q4	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D5	8-719-911-19	DIODE 1SS119		Q5	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D6	8-719-911-19	DIODE 1SS119		Q6	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D7	8-719-911-19	DIODE 1SS119		Q7	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D8	8-719-911-19	DIODE 1SS119		Q8	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D9	8-719-109-93	DIODE RD6.2ESB2		Q9	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D11	8-719-948-45	DIODE ERA22-08		Q10	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D12	8-719-911-19	DIODE 1SS119		Q11	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D13	8-719-109-85	DIODE RD5.1ESB2		Q12	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D101	8-719-901-83	DIODE 1SS83		Q13	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D103	8-719-109-51	DIODE RD2.0ESB2		Q14	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D104	8-719-911-19	DIODE 1SS119		Q15	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D105	8-719-901-83	DIODE 1SS83		Q16	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D106	8-719-911-19	DIODE 1SS119		Q17	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D107	8-719-911-19	DIODE 1SS119		Q18	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D109	8-719-911-19	DIODE 1SS119		Q19	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D110	8-719-109-51	DIODE RD2.0ESB2		Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D111	8-719-911-19	DIODE 1SS119		Q102	8-729-140-50	TRANSISTOR 2SC3209LK	
D112	8-719-911-19	DIODE 1SS119		Q103	8-729-801-88	TRANSISTOR 2SA1381-E	
D113	8-719-911-19	DIODE 1SS119		Q104	8-729-801-88	TRANSISTOR 2SA1381-E	
D114	8-719-110-36	DIODE RD13ESB2		Q105	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D115	8-719-911-19	DIODE 1SS119		Q106	8-729-140-50	TRANSISTOR 2SC3209LK	
D201	8-719-901-83	DIODE 1SS83		Q107	8-729-801-88	TRANSISTOR 2SA1381-E	
D203	8-719-109-51	DIODE RD2.0ESB2		Q108	8-729-900-63	TRANSISTOR DTA124ES	
D204	8-719-911-19	DIODE 1SS119		Q109	8-729-900-63	TRANSISTOR DTA124ES	
D205	8-719-901-83	DIODE 1SS83		Q110	8-729-900-36	TRANSISTOR DTC124ES	
D206	8-719-911-19	DIODE 1SS119		Q111	8-729-105-74	TRANSISTOR 2SK523-M1	
D207	8-719-911-19	DIODE 1SS119		Q112	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D209	8-719-911-19	DIODE 1SS119		Q113	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D210	8-719-109-51	DIODE RD2.0ESB2		Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D211	8-719-911-19	DIODE 1SS119		Q202	8-729-140-50	TRANSISTOR 2SC3209LK	
D212	8-719-911-19	DIODE 1SS119		Q203	8-729-801-88	TRANSISTOR 2SA1381-E	
D213	8-719-911-19	DIODE 1SS119		Q204	8-729-801-88	TRANSISTOR 2SA1381-E	
D214	8-719-110-36	DIODE RD13ESB2		Q205	8-729-119-78	TRANSISTOR 2SC2785-HFE	
<IC>				Q206	8-729-140-50	TRANSISTOR 2SC3209LK	
IC1	8-759-929-65	IC LM7912CT		Q207	8-729-801-88	TRANSISTOR 2SA1381-E	
IC2	8-759-701-79	IC NJM7812FA		Q208	8-729-900-63	TRANSISTOR DTA124ES	
IC3	8-759-991-41	IC LM78L05ACZ		Q209	8-729-900-63	TRANSISTOR DTA124ES	
IC4	8-759-000-01	IC MC74HC4538N		Q210	8-729-900-36	TRANSISTOR DTC124ES	
IC5	8-759-984-55	IC MB675429		Q211	8-729-105-74	TRANSISTOR 2SK523-M1	
IC6	8-759-916-71	IC SN74HC244AN		Q212	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC7	8-759-032-74	IC MC74HC00AN		<RESISTOR>			
IC8	8-759-990-82	IC TL082CP		R1	1-249-405-11	CARBON 100 5%	1/4W
IC101	8-749-922-43	IC VPH05A		R2	1-215-437-00	METAL 4.7K 1%	1/4W
IC102	8-759-990-82	IC TL082CP		R3	1-249-441-11	CARBON 100K 5%	1/4W
IC103	8-749-920-88	IC SNY-8C02		R4	1-215-449-00	METAL 15K 1%	1/4W
IC104	8-749-923-15	IC TY885002A		R5	1-249-405-11	CARBON 100 5%	1/4W
IC201	8-749-922-43	IC VPH05A		R6	1-249-438-11	CARBON 56K 5%	1/4W
IC202	8-759-990-82	IC TL082CP		R7	1-249-437-11	CARBON 47K 5%	1/4W
IC203	8-749-920-88	IC SNY-8C02		R8	1-249-405-11	CARBON 100 5%	1/4W
IC204	8-749-923-15	IC TY885002A		R9	1-215-449-00	METAL 15K 1%	1/4W
<COIL>				R10	1-215-447-00	METAL 12K 1%	1/4W
L101	1-408-880-00	INDUCTOR 0.68UH		R11	1-249-405-11	CARBON 100 5%	1/4W
L201	1-408-880-00	INDUCTOR 0.68UH		R12	1-249-405-11	CARBON 100 5%	1/4W
				R13	1-249-441-11	CARBON 100K 5%	1/4W
				R14	1-249-423-11	CARBON 3.3K 5%	1/4W
				R15	1-249-397-11	CARBON 22 5%	1/4W F

CA(RG) Y

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R16	1-249-405-11	CARBON	100 5% 1/4W	R141	1-215-421-00	METAL	1K 1% 1/4W
R17	1-249-423-11	CARBON	3.3K 5% 1/4W	R142	1-249-417-11	CARBON	1K 5% 1/4W
R18	1-249-426-11	CARBON	5.6K 5% 1/4W				
R19	1-249-415-11	CARBON	680 5% 1/4W	R143	1-247-903-00	CARBON	1M 5% 1/4W
R20	1-249-397-11	CARBON	22 5% 1/4W F	R144	1-249-427-11	CARBON	6.8K 5% 1/4W
				R145	1-249-405-11	CARBON	100 5% 1/4W
R21	1-249-413-11	CARBON	470 5% 1/4W	R146	1-247-895-00	CARBON	470K 5% 1/4W
R22	1-215-443-00	METAL	8.2K 1% 1/4W	R147	1-215-457-00	METAL	33K 1% 1/4W
R23	1-215-447-00	METAL	12K 1% 1/4W				
R24	1-215-453-00	METAL	22K 1% 1/4W	R148	1-249-410-11	CARBON	270 5% 1/4W F
R25	1-215-457-00	METAL	33K 1% 1/4W	R149	1-249-405-11	CARBON	100 5% 1/4W
				R201	1-215-401-11	METAL	150 1% 1/4W
R26	1-249-405-11	CARBON	100 5% 1/4W	R202	1-215-401-11	METAL	150 1% 1/4W
R27	1-249-405-11	CARBON	100 5% 1/4W	R203	1-215-461-00	METAL	47K 1% 1/4W
R28	1-215-431-00	METAL	2.7K 1% 1/4W				
R29	1-249-429-11	CARBON	10K 5% 1/4W	R204	1-215-469-00	METAL	100K 1% 1/4W
R30	1-215-469-00	METAL	100K 1% 1/4W	R205	1-215-469-00	METAL	100K 1% 1/4W
				R206	1-215-471-00	METAL	120K 1% 1/4W
R31	1-249-429-11	CARBON	10K 5% 1/4W	R207	1-249-421-11	CARBON	2.2K 5% 1/4W
R32	1-215-443-00	METAL	8.2K 1% 1/4W	R208	1-249-403-11	CARBON	68 5% 1/4W F
R33	1-215-443-00	METAL	8.2K 1% 1/4W				
R34	1-215-443-00	METAL	8.2K 1% 1/4W	R209	1-215-429-00	METAL	2.2K 1% 1/4W
R35	1-247-887-00	CARBON	220K 5% 1/4W	R211	1-249-421-11	CARBON	2.2K 5% 1/4W
				R212	1-215-383-00	METAL	27 1% 1/4W
R36	1-247-887-00	CARBON	220K 5% 1/4W	R216	1-215-473-00	METAL	150K 1% 1/4W
R37	1-247-887-00	CARBON	220K 5% 1/4W	R217	1-249-421-11	CARBON	2.2K 5% 1/4W
R38	1-249-441-11	CARBON	100K 5% 1/4W				
R39	1-215-469-00	METAL	100K 1% 1/4W	R218	1-249-427-11	CARBON	6.8K 5% 1/4W
R40	1-249-433-11	CARBON	22K 5% 1/4W	R219	1-215-453-00	METAL	22K 1% 1/4W
R41	1-215-471-00	METAL	120K 1% 1/4W	R220	1-215-469-00	METAL	100K 1% 1/4W
				R221	1-215-471-00	METAL	120K 1% 1/4W
R42	1-249-433-11	CARBON	22K 5% 1/4W	R222	1-215-441-00	METAL	6.8K 1% 1/4W
R43	1-249-405-11	CARBON	100 5% 1/4W				
R44	1-249-429-11	CARBON	10K 5% 1/4W	R223	1-215-481-00	METAL	330K 1% 1/4W
R101	1-215-401-11	METAL	150 1% 1/4W	R224	1-215-433-00	METAL	3.3K 1% 1/4W
R102	1-215-401-11	METAL	150 1% 1/4W	R225	1-249-431-11	CARBON	15K 5% 1/4W
				R226	1-249-431-11	CARBON	15K 5% 1/4W
R103	1-215-473-00	METAL	150K 1% 1/4W	R227	1-249-415-11	CARBON	680 5% 1/4W
R105	1-215-469-00	METAL	100K 1% 1/4W				
R106	1-215-465-00	METAL	68K 1% 1/4W	R228	1-249-405-11	CARBON	100 5% 1/4W
R107	1-249-421-11	CARBON	2.2K 5% 1/4W	R229	1-249-409-11	CARBON	220 5% 1/4W F
R108	1-249-403-11	CARBON	68 5% 1/4W F	R230	1-215-431-00	METAL	2.7K 1% 1/4W
				R231	1-202-549-00	SOLID	100 5% 1/2W
R109	1-215-429-00	METAL	2.2K 1% 1/4W	R232	1-202-818-00	SOLID	1K 10% 1/2W
R111	1-249-421-11	CARBON	2.2K 5% 1/4W				
R112	1-215-383-00	METAL	27 1% 1/4W	R233	1-249-421-11	CARBON	2.2K 5% 1/4W F
R116	1-215-473-00	METAL	150K 1% 1/4W	R234	1-215-469-00	METAL	100K 1% 1/4W
R117	1-249-421-11	CARBON	2.2K 5% 1/4W	R235	1-249-429-11	CARBON	10K 5% 1/4W
				R236	1-202-549-00	SOLID	100 5% 1/2W
R118	1-249-427-11	CARBON	6.8K 5% 1/4W	R237	1-215-443-00	METAL	8.2K 1% 1/4W
R119	1-215-453-00	METAL	22K 1% 1/4W				
R120	1-215-469-00	METAL	100K 1% 1/4W	R238	1-215-435-00	METAL	3.9K 1% 1/4W
R121	1-215-471-00	METAL	120K 1% 1/4W	R239	1-249-421-11	CARBON	2.2K 5% 1/4W
R122	1-215-441-00	METAL	6.8K 1% 1/4W	R240	1-215-453-00	METAL	22K 1% 1/4W
				R241	1-215-421-00	METAL	1K 1% 1/4W
R123	1-215-481-00	METAL	330K 1% 1/4W	R242	1-249-417-11	CARBON	1K 5% 1/4W
R124	1-215-433-00	METAL	3.3K 1% 1/4W				
R125	1-249-431-11	CARBON	15K 5% 1/4W	R243	1-247-903-00	CARBON	1M 5% 1/4W
R126	1-249-431-11	CARBON	15K 5% 1/4W	R244	1-249-427-11	CARBON	6.8K 5% 1/4W
R127	1-249-415-11	CARBON	680 5% 1/4W	R245	1-249-405-11	CARBON	100 5% 1/4W
				R246	1-247-895-00	CARBON	470K 5% 1/4W
R128	1-249-405-11	CARBON	100 5% 1/4W	R247	1-249-405-11	CARBON	100 5% 1/4W
R129	1-249-409-11	CARBON	220 5% 1/4W F				
R130	1-215-431-00	METAL	2.7K 1% 1/4W				
R131	1-202-549-00	SOLID	100 5% 1/2W				
R132	1-202-818-00	SOLID	1K 10% 1/2W				
R133	1-249-421-11	CARBON	2.2K 5% 1/4W F				
R134	1-249-429-11	CARBON	10K 5% 1/4W				
R135	1-215-469-00	METAL	100K 1% 1/4W				
R136	1-202-549-00	SOLID	100 5% 1/2W				
R137	1-215-443-00	METAL	8.2K 1% 1/4W				
R138	1-215-435-00	METAL	3.9K 1% 1/4W				
R139	1-249-421-11	CARBON	2.2K 5% 1/4W				
R140	1-215-453-00	METAL	22K 1% 1/4W				

*A-1394-215-A Y BOARD, COMPLETE

*1-526-950-11 SOCKET, IC 64P
*1-568-984-11 CONNECTOR, MALE 96P
1-570-204-21 SWITCH, KEY BOARD
1-570-598-11 SWITCH, DIP

Y

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<CAPACITOR>							
C1	1-124-927-11	ELECT 4.7MF	20% 50V	C65	1-163-036-00	CERAMIC CHIP 0.068MF	50V
C2	1-124-927-11	ELECT 4.7MF	20% 50V	C67	1-124-119-00	ELECT 330MF	20% 16V
C3	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C68	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C4	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C69	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C5	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C70	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C6	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C71	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C7	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C72	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C8	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C73	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C9	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C74	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C10	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C75	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C11	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	C76	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C12	1-163-239-11	CERAMIC CHIP 33PF	5% 50V	C77	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C13	1-163-239-11	CERAMIC CHIP 33PF	5% 50V	C78	1-124-907-11	ELECT 10MF	20% 50V
C14	1-163-036-00	CERAMIC CHIP 0.068MF	10% 25V	C83	1-124-907-11	ELECT 10MF	20% 50V
C15	1-164-344-11	CERAMIC CHIP 0.068MF	10% 25V	C84	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C16	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C85	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C17	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C86	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C18	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C87	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C19	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C90	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C20	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C91	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C21	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	C92	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C22	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	<DIODE>			
C23	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D1	8-719-971-20	DIODE ERC38-06	
C24	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D2	8-719-971-20	DIODE ERC38-06	
C25	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D3	8-719-104-34	DIODE 1S2836	
C26	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D4	8-719-800-60	DIODE TLR214	
C27	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D5	8-719-104-34	DIODE 1S2836	
C28	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D7	8-719-400-18	DIODE MA152WK	
C29	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	<IC>			
C30	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC1	8-759-320-49	IC HD64180R1P8	
C32	1-163-263-11	CERAMIC CHIP 330PF	5% 50V	IC2	8-759-092-89	IC MBM27C512P-20-PJY015	
C33	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC3	8-752-332-28	IC CXK5864BM-12L-T6	
C34	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC4	8-759-720-67	IC X28C64PI	
C35	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC5	8-759-032-17	IC MC74HC14AF	
C36	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC6	8-759-206-28	IC TC74HC123F	
C37	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC7	8-759-008-21	IC MC74HC541F	
C38	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC8	8-759-008-21	IC MC74HC541F	
C39	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC9	8-759-995-97	IC MB8855-1314N	
C40	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC10	8-759-984-56	IC MB670840PF	
C41	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC11	8-759-984-59	IC MB654842UPF	
C42	1-124-477-11	ELECT 47MF	20% 16V	IC12	8-759-984-58	IC MB671469PF	
C43	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	IC13	8-759-984-57	IC MB605195	
C44	1-163-089-00	CERAMIC CHIP 6PF	0.5PF 50V	IC14	8-752-322-10	IC CXK5814P-45L	
C45	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	IC15	8-752-353-42	IC CXK3864-040M-T6	
C46	1-124-119-00	ELECT 330MF	20% 16V	IC16	8-752-353-43	IC CXK3864-041M-T6	
C47	1-124-477-11	ELECT 47MF	20% 16V	IC17	8-752-353-44	IC CXK3864-042M-T6	
C48	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC18	8-759-301-24	IC HD10124	
C49	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC19	8-759-301-24	IC HD10124	
C50	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC20	8-752-306-51	IC CX23065A	
C51	1-126-103-11	ELECT 470MF	20% 16V	*1-563-949-11	SOCKET, SIL 8P; IC20		
C52	1-126-101-11	ELECT 100MF	20% 16V	IC21	8-759-911-24	IC SN74S124N	
C53	1-126-101-11	ELECT 100MF	20% 16V	IC22	8-759-100-93	IC UPC393G2	
C54	1-126-101-11	ELECT 100MF	20% 16V	IC23	8-759-031-50	IC MC74F00M	
C55	1-126-101-11	ELECT 100MF	20% 16V	IC24	8-759-008-57	IC MC34051P	
C56	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V	IC25	8-759-114-06	IC UPC814G2-T1	
C57	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V	IC26	8-759-032-32	IC MC74HC132AF	
C58	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V	IC27	8-759-925-98	IC SN74HC107ANS	
C59	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC28	8-759-032-01	IC MC74HC00AF	
C60	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	IC29	8-759-206-28	IC TC74HC123F	
C61	1-163-251-11	CERAMIC CHIP 100PF	5% 50V				
C62	1-163-251-11	CERAMIC CHIP 100PF	5% 50V				
C63	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V				
C64	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V				

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<CAPACITOR>							
C1	1-124-927-11	ELECT 4.7MF	20% 50V	C65	1-163-036-00	CERAMIC CHIP 0.068MF	50V
C2	1-124-927-11	ELECT 4.7MF	20% 50V	C67	1-124-119-00	ELECT 330MF	20% 16V
C3	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C68	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C4	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C69	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C5	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C70	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C6	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C71	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C7	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C72	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C8	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C73	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C9	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C74	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C10	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C75	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C11	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	C76	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C12	1-163-239-11	CERAMIC CHIP 33PF	5% 50V	C77	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C13	1-163-239-11	CERAMIC CHIP 33PF	5% 50V	C78	1-124-907-11	ELECT 10MF	20% 50V
C14	1-163-036-00	CERAMIC CHIP 0.068MF	10% 25V	C83	1-124-907-11	ELECT 10MF	20% 50V
C15	1-164-344-11	CERAMIC CHIP 0.068MF	10% 25V	C84	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C16	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C85	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C17	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C86	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C18	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C87	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C19	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C90	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C20	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C91	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C21	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	C92	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C22	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	<DIODE>			
C23	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D1	8-719-971-20	DIODE ERC38-06	
C24	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D2	8-719-971-20	DIODE ERC38-06	
C25	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D3	8-719-104-34	DIODE 1S2836	
C26	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D4	8-719-800-60	DIODE TLR214	
C27	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D5	8-719-104-34	DIODE 1S2836	
C28	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D7	8-719-400-18	DIODE MA152WK	
C29	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	<IC>			
C30	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC1	8-759-320-49	IC HD64180R1P8	
C32	1-163-263-11	CERAMIC CHIP 330PF	5% 50V	IC2	8-759-092-89	IC MBM27C512P-20-PJY015	
C33	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC3	8-752-332-28	IC CXK5864BM-12L-T6	
C34	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC4	8-759-720-67	IC X28C64PI	
C35	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC5	8-759-032-17	IC MC74HC14AF	
C36	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC6	8-759-206-28	IC TC74HC123F	
C37	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC7	8-759-008-21	IC MC74HC541F	
C38	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC8	8-759-008-21	IC MC74HC541F	
C39	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC9	8-759-995-97	IC MB8855-1314N	
C40	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC10	8-759-984-56	IC MB670840PF	
C41	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC11	8-759-984-59	IC MB654842UPF	
C42	1-124-477-11	ELECT 47MF	20% 16V	IC12	8-759-984-58	IC MB671469PF	
C43	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	IC13	8-759-984-57	IC MB605195	
C44	1-163-089-00	CERAMIC CHIP 6PF	0.5PF 50V	IC14	8-752-322-10	IC CXK5814P-45L	
C45	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	IC15	8-752-353-42	IC CXK3864-040M-T6	
C46	1-124-119-00	ELECT 330MF	20% 16V	IC16	8-752-353-43	IC CXK3864-041M-T6	
C47	1-124-119-00	ELECT 330MF	20% 16V	IC17	8-752-353-44	IC CXK3864-042M-T6	
C48	1-124-477-11	ELECT 47MF	20% 16V	IC18	8-759-301-24	IC HD10124	
C49	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC19	8-759-301-24	IC HD10124	
C50	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC20	8-752-306-51	IC CX23065A	
C51	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	*1-563-949-11	SOCKET, SIL 8P; IC20		
C52	1-126-103-11	ELECT 470MF	20% 16V	IC21	8-759-911-24	IC SN74S124N	
C53	1-126-101-11	ELECT 100MF	20% 16V	IC22	8-759-100-93	IC UPC393G2	
C54	1-126-101-11	ELECT 100MF	20% 16V	IC23	8-759-031-50	IC MC74F00M	
C55	1-126-101-11	ELECT 100MF	20% 16V	IC24	8-759-008-57	IC MC34051P	
C56	1-126-101-11	ELECT 100MF	20% 16V	IC25	8-759-114-06	IC UPC814G2-T1	
C57	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V	IC26	8-759-032-32	IC MC74HC132AF	
C58	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V	IC27	8-759-925-98	IC SN74HC107ANS	
C59	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC28	8-759-032-01	IC MC74HC00AF	
C60	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	IC29	8-759-206-28	IC TC74HC123F	
C61	1-163-251-11	CERAMIC CHIP 100PF	5% 50V				
C62	1-163-251-11	CERAMIC CHIP 100PF	5% 50V				
C63	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V				
C64	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V				



The components identified by shading and mark **Δ** are critical for safety.
 Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<COIL>				R42	1-216-037-00	METAL GLAZE 330 5% 1/10W	
L1	1-459-155-00	COIL (WITH CORE) 45UH		R43	1-216-037-00	METAL GLAZE 330 5% 1/10W	
L2	1-459-155-00	COIL (WITH CORE) 45UH		R44	1-216-025-00	METAL GLAZE 100 5% 1/10W	
L3	1-459-155-00	COIL (WITH CORE) 45UH		R45	1-216-037-00	METAL GLAZE 330 5% 1/10W	
L4	1-459-155-00	COIL (WITH CORE) 45UH		R46	1-216-037-00	METAL GLAZE 330 5% 1/10W	
<IC LINK>				R47	1-216-025-00	METAL GLAZE 100 5% 1/10W	
PS1	Δ 1-532-679-91	LINK, IC		R48	1-216-037-00	METAL GLAZE 330 5% 1/10W	
PS2	Δ 1-532-679-91	LINK, IC		R49	1-216-037-00	METAL GLAZE 330 5% 1/10W	
<TRANSISTOR>				R50	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q1	8-729-230-46	TRANSISTOR 2SA1162-YG		R51	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q2	8-729-230-49	TRANSISTOR 2SC2712-YG		R52	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q3	8-729-230-46	TRANSISTOR 2SA1162-YG		R53	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q4	8-729-230-46	TRANSISTOR 2SA1162-YG		R54	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q5	8-729-230-49	TRANSISTOR 2SC2712-YG		R55	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q6	8-729-230-49	TRANSISTOR 2SC2712-YG		R56	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q7	8-729-230-49	TRANSISTOR 2SC2712-YG		R57	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q9	8-729-230-46	TRANSISTOR 2SA1162-YG		R58	1-216-037-00	METAL GLAZE 330 5% 1/10W	
<RESISTOR>				R59	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R1	1-216-001-00	METAL GLAZE 10 5% 1/10W		R60	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R2	1-216-001-00	METAL GLAZE 10 5% 1/10W		R61	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R3	1-216-001-00	METAL GLAZE 10 5% 1/10W		R62	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R4	1-216-001-00	METAL GLAZE 10 5% 1/10W		R63	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R5	1-216-001-00	METAL GLAZE 10 5% 1/10W		R64	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R6	1-216-001-00	METAL GLAZE 10 5% 1/10W		R65	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R7	1-216-001-00	METAL GLAZE 10 5% 1/10W		R66	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R8	1-216-001-00	METAL GLAZE 10 5% 1/10W		R67	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R9	1-216-001-00	METAL GLAZE 10 5% 1/10W		R68	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R10	1-216-001-00	METAL GLAZE 10 5% 1/10W		R69	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R11	1-216-001-00	METAL GLAZE 10 5% 1/10W		R70	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R12	1-216-001-00	METAL GLAZE 10 5% 1/10W		R71	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R13	1-216-025-00	METAL GLAZE 100 5% 1/10W		R72	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R14	1-216-025-00	METAL GLAZE 100 5% 1/10W		R73	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R15	1-216-025-00	METAL GLAZE 100 5% 1/10W		R74	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R17	1-216-037-00	METAL GLAZE 330 5% 1/10W		R75	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R18	1-216-025-00	METAL GLAZE 100 5% 1/10W		R76	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R19	1-216-025-00	METAL GLAZE 100 5% 1/10W		R77	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R20	1-216-037-00	METAL GLAZE 330 5% 1/10W		R78	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R21	1-216-025-00	METAL GLAZE 100 5% 1/10W		R79	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R22	1-216-025-00	METAL GLAZE 100 5% 1/10W		R80	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R23	1-216-025-00	METAL GLAZE 100 5% 1/10W		R81	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R24	1-216-037-00	METAL GLAZE 330 5% 1/10W		R82	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R25	1-216-037-00	METAL GLAZE 330 5% 1/10W		R83	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R26	1-216-037-00	METAL GLAZE 330 5% 1/10W		R84	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R27	1-216-025-00	METAL GLAZE 100 5% 1/10W		R85	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R28	1-216-025-00	METAL GLAZE 100 5% 1/10W		R86	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R29	1-216-025-00	METAL GLAZE 100 5% 1/10W		R87	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R30	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W		R88	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R31	1-216-025-00	METAL GLAZE 100 5% 1/10W		R89	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R32	1-216-025-00	METAL GLAZE 100 5% 1/10W		R90	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R33	1-216-037-00	METAL GLAZE 330 5% 1/10W		R91	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R34	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W		R92	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R36	1-216-037-00	METAL GLAZE 330 5% 1/10W		R93	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R37	1-216-025-00	METAL GLAZE 100 5% 1/10W		R100	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R38	1-216-025-00	METAL GLAZE 100 5% 1/10W		R101	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R39	1-216-037-00	METAL GLAZE 330 5% 1/10W		R102	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R40	1-216-037-00	METAL GLAZE 330 5% 1/10W		R103	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R41	1-216-037-00	METAL GLAZE 330 5% 1/10W		R104	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
				R105	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
				R106	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
				R107	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
				R108	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
				R109	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
				R110	1-216-097-00	METAL GLAZE 100K 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R111	1-216-121-00	METAL GLAZE	1M 5%	1/10W			
R112	1-216-121-00	METAL GLAZE	1M 5%	1/10W			
R113	1-216-073-00	METAL GLAZE	10K 5%	1/10W			
R114	1-216-073-00	METAL GLAZE	10K 5%	1/10W			
R115	1-216-049-00	METAL GLAZE	1K 5%	1/10W			
R116	1-216-073-00	METAL GLAZE	10K 5%	1/10W			
R117	1-216-073-00	METAL GLAZE	10K 5%	1/10W			
R118	1-216-073-00	METAL GLAZE	10K 5%	1/10W			
R119	1-216-073-00	METAL GLAZE	10K 5%	1/10W			
R120	1-216-073-00	METAL GLAZE	10K 5%	1/10W			
R121	1-216-073-00	METAL GLAZE	10K 5%	1/10W			
R122	1-216-073-00	METAL GLAZE	10K 5%	1/10W			
R123	1-216-073-00	METAL GLAZE	10K 5%	1/10W			
R124	1-216-045-00	METAL GLAZE	680 5%	1/10W			
R125	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R126	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R127	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R128	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R129	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R130	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R131	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R132	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R133	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R134	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R135	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R136	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R137	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R138	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R139	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R140	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R141	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R142	1-216-049-00	METAL GLAZE	1K 5%	1/10W			
R143	1-216-049-00	METAL GLAZE	1K 5%	1/10W			
R146	1-216-675-11	METAL CHIP	10K 0.50%	1/10W			
R147	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R148	1-216-049-00	METAL GLAZE	1K 5%	1/10W			
R149	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R150	1-216-105-00	METAL GLAZE	220K 5%	1/10W			
R151	1-216-113-00	METAL GLAZE	470K 5%	1/10W			
R152	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R153	1-216-061-00	METAL GLAZE	3.3K 5%	1/10W			
R154	1-216-061-00	METAL GLAZE	3.3K 5%	1/10W			
R155	1-216-061-00	METAL GLAZE	3.3K 5%	1/10W			
R166	1-216-025-00	METAL GLAZE	100 5%	1/10W			
R167	1-216-037-00	METAL GLAZE	330 5%	1/10W			
R168	1-216-067-00	METAL GLAZE	5.6K 5%	1/10W			
R169	1-216-057-00	METAL GLAZE	2.2K 5%	1/10W			
R170	1-216-057-00	METAL GLAZE	2.2K 5%	1/10W			
R171	1-216-055-00	METAL GLAZE	1.8K 5%	1/10W			
R172	1-216-085-00	METAL GLAZE	33K 5%	1/10W			
R173	1-216-041-00	METAL GLAZE	470 5%	1/10W			
R174	1-216-079-00	METAL GLAZE	18K 5%	1/10W			
R175	1-216-049-00	METAL GLAZE	1K 5%	1/10W			
R176	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W			
R177	1-216-129-00	METAL GLAZE	2.2M 5%	1/10W			
R178	1-216-045-00	METAL GLAZE	680 5%	1/10W			
R182	1-216-033-00	METAL GLAZE	220 5%	1/10W			
R183	1-216-033-00	METAL GLAZE	220 5%	1/10W			
R184	1-216-063-00	METAL GLAZE	3.9K 5%	1/10W			
R185	1-216-295-00	METAL GLAZE	0 5%	1/10W			
R187	1-216-295-00	METAL GLAZE	0 5%	1/10W			
R189	1-216-055-00	METAL GLAZE	1.8K 5%	1/10W			
R190	1-216-037-00	METAL GLAZE	330 5%	1/10W			
		</					

7074
HDIH-1200M
RM-1200

SONY.
SERVICE MANUAL

AEP Model
Chassis No. SCC-D16B-A

SUPPLEMENT-2

File this supplement with the service manual.

INTRODUCTION

SUBJECT : Change of WHITE BALANCE adjustment

The brightness degree has been changed on model with the following serial number, and due to this, the white balance adjustment method has also been changed.

Serial No. 5000026 and later

Correspond to 500 lm model

4-13. WHITE BALANCE ADJUSTMENT

Preparations

1. Remove the commander blinders.
2. Press the **TEST** key and hold it for at least 5 seconds.
3. The screen changes and the serviceman mode display appears.
4. Press the **▲** arrow key.

This puts the system into serviceman mode.

1. Blue defocus adjustment

- 1) Press the FOCUS **MG** key to put the system into magnet focus adjustment mode.
- 2) Press the ADJ **B** key.
- 3) Press the **◀** arrow key to minimize the setting, then press the **▶** key to move in the direction of the point where the image is just focused and adjust for the point where the gaps between the horizontal lines and between the vertical lines can be seen (slightly defocused).

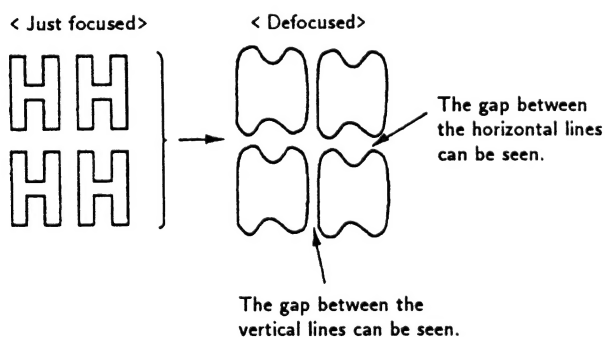


Fig. 26

- 4) Press the **MEMORY** key.

2. G2 volume adjustment

- 1) Short pines ① and ② on the CF2-3 connector of the CF-2 board. (Remove the L-6 connector from the L board and attach it to pines ① and ② of the CF2-3 connector to short them.)
- 2) Input a high vision signal. (Shibasoku TG91E6, etc.)
- 3) Press the **TEST** key to set an all-white signal.
- 4) Press the **PAGE** key and select PAGE 4.
- 5) Press the (**◀** and **▶**) arrow keys to select HDTV1.

- 6) Press the (**▲** and **▼**) arrow keys to select input signal mode.
 - 7) Next, press the **◀** or **▶** key to select RGB or Y, PB, PR according to the input.
 - 8) In the same way, use the (**◀**, **▶**, **▲**, and **▼**) arrow keys to select COLOR SELECT : COL.
 - 9) In the same way, use the (**◀**, **▶**, **▲**, and **▼**) arrow keys to select SYNC SOURCE : INT or EXT.
 - 10) Press the **MEMORY** key.
 - 11) Press **GAIN** key, and adjust the GAIN data with arrow-keys (**◀**, **▶**) to the values below
R : 150, G : 240, B : 250
 - 12) Press **BIAS** key, and adjust the BIAS data with arrow-keys (**◀**, **▶**) to the values below
R : 128, G : 128, B : 128
- From now, select HDTV2, VID1 and VID2 and set the gain and bias for each of them.

GAIN DATA

HDTV2	R : 150 G : 220 B : 250
VID1	R : 140 G : 200 B : 200
VID2	R : 140 G : 200 B : 200

BIAS DATA

HDTV2	R : 128
VID1	G : 128
VID2	B : 128

- 13) Press the **TEST** key and display the pluge signal on the screen.
- 14) In a dark room, turn the G2 control to adjust the red, green, and blue single-color brightnesses this way.
 - Adjust so that 0 IRE (background) is the same brightness as - 5 IRE and so +5 IRE glows slightly.

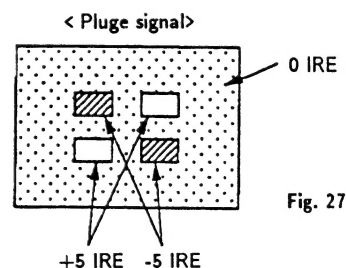


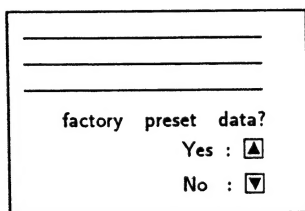
Fig. 27

- 15) Remove the short on the CF2-3 connector.

Correspond to 500 Im model

3. HDTV1 white balance adjustment (6500 ° K)

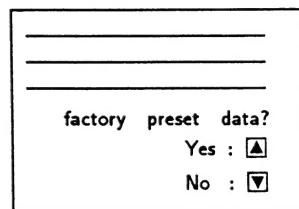
- 1) Press **PAGE** key to select "PAGE 4".
- 2) Press arrow-keys to select "HDTV1".
- 3) Press **BIAS** key (or **GAIN** key) to enter to the adjustment mode.
- 4) Press both arrow keys (**◀** and **▶**) together, then check if the message below is displayed.



- 5) Press arrow key **▲**. (By this process, the factory preset data is put into the memory.)
- 6) Press **BIAS** key.
- 7) Keep pressing **TEST** key until the screen is changed to that of all-white signal.
- 8) Set CONT at the lowest, and then set BRT at the lowest.
- 9) Use a color meter (such as MINOLTA's CS-100) and adjust Blue and Red to set the values at $x : 0.313 \pm 0.025$, and $y : 0.329 \pm 0.025$. Do not adjust Green BIAS value.
- 10) Press **MEMORY** key.
- 11) Press **GAIN** key.
- 12) Keep pressing **TEST** key until the screen is changed to that of external signals.
- 13) Press **RESET** key, and set CONT at 80% and BRT at 50%.
- 14) Use the color meter and adjust Blue and Red to set the values at $x : 0.313 \pm 0.015$, and $y : 0.329 \pm 0.015$. Do not adjust Green GAIN value.
- 15) Press **MEMORY** key.

4. HDTV2 white balance adjustment (9300 ° K)

- 1) Press **PAGE** key to select "PAGE 4".
- 2) Press arrow-keys to select "HDTV2".
- 3) Press **BIAS** key (or **GAIN** key) to enter to the adjustment mode.
- 4) Press both arrow keys (**◀** and **▶**) together, then check if the message below is displayed.

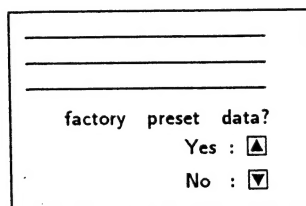


- 5) Press arrow key **▲**. (By this process, the factory preset data is put into the memory.)
- 6) Press **BIAS** key.
- 7) Keep pressing **TEST** key until the screen is changed to that of all-white signal.
- 8) Set CONT at the lowest, and then set BRT at the lowest.
- 9) Use a color meter (such as MINOLTA's CS-100) and adjust Blue and Red to set the values at $x : 0.284 \pm 0.025$, and $y : 0.329 \pm 0.025$. Do not adjust Green BIAS value.
- 10) Press **MEMORY** key.
- 11) Press **GAIN** key.
- 12) Keep pressing **TEST** key until the screen is changed to that of external signals.
- 13) Press **RESET** key, and set CONT at 80% and BRT at 50%.
- 14) Use the color meter and adjust Blue and Red to set the values at $x : 0.313 \pm 0.015$, and $y : 0.329 \pm 0.015$. Do not adjust Green GAIN value.
- 15) Press **MEMORY** key.

Correspond to 500 lm model

5. VID1 white balance adjustment (6500 ° K)

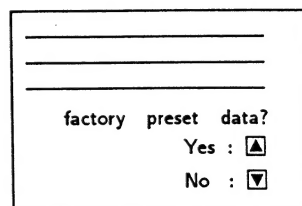
- 1) Press **PAGE** key to select "PAGE 4".
- 2) Press arrow-keys to select "VID1".
- 3) Press **BIAS** key (or **GAIN** key) to enter to the adjustment mode.
- 4) Press both arrow keys (**◀** and **▶**) together, then check if the message below is displayed.



- 5) Press arrow key **▲**. (By this process, the factory preset data is put into the memory.)
- 6) Press **BIAS** key.
- 7) Keep pressing **TEST** key until the screen is changed to that of all-white signal.
- 8) Set CONT at the lowest, and then set BRT at the lowest.
- 9) Use a color meter (such as MINOLTA's CS-100) and adjust Blue and Red to set the values at $x : 0.313 \pm 0.025$, and $y : 0.329 \pm 0.025$. Do not adjust Green BIAS value.
- 10) Press **MEMORY** key.
- 11) Press **GAIN** key.
- 12) Keep pressing **TEST** key until the screen is changed to that of external signals.
- 13) Press **RESET** key, and set CONT at 80% and BRT at 50%.
- 14) Use the color meter and adjust Blue and Red to set the values at $x : 0.313 \pm 0.015$, and $y : 0.329 \pm 0.015$. Do not adjust Green GAIN value.
- 15) Press **MEMORY** key.

6. VID2 white balance adjustment (9300 ° K)

- 1) Press **PAGE** key to select "PAGE 4".
- 2) Press arrow-keys to select "VID2".
- 3) Press **BIAS** key (or **GAIN** key) to enter to the adjustment mode.
- 4) Press both arrow keys (**◀** and **▶**) together, then check if the message below is displayed.



- 5) Press arrow key **▲**. (By this process, the factory preset data is put into the memory.)
- 6) Press **BIAS** key.
- 7) Keep pressing **TEST** key until the screen is changed to that of all-white signal.
- 8) Set CONT at the lowest, and then set BRT at the lowest.
- 9) Use a color meter (such as MINOLTA's CS-100) and adjust Blue and Red to set the values at $x : 0.284 \pm 0.025$, and $y : 0.297 \pm 0.025$. Do not adjust Green BIAS value.
- 10) Press **MEMORY** key.
- 11) Press **GAIN** key.
- 12) Keep pressing **TEST** key until the screen is changed to that of external signals.
- 13) Press **RESET** key, and set CONT at 80% and BRT at 50%.
- 14) Use the color meter and adjust Green and Red to set the values at $x : 0.284 \pm 0.015$, and $y : 0.297 \pm 0.015$. Do not adjust Blue GAIN value.
- 15) Press **MEMORY** key.

Correspond to 500 lm model

9-978-012-82

Sony Corporation
Display Products Group

English
94CK05108-1
Printed in Japan
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